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TRENT UNIVERSITY
DEPT. OF CHEMISTRY

INTERNATIONAL CRITICAL TABLES
OF
NUMERICAL DATA
PHYSICS, CHEMISTRY AND TECHNOLOGY

INDEX

INTERNATIONAL CRITICAL TABLES OF NUMERICAL DATA, PHYSICS, CHEMISTRY AND TECHNOLOGY

Prepared under the Auspices of the International
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OF THE
UNITED STATES OF AMERICA

INDEX
VOLUMES I-VII

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INTRODUCTION

In order to facilitate the use of the Index to the seven volumes of International Critical Tables, the following statement is made regarding its arrangement and contents.

Arrangement. A straight alphabetical arrangement is used throughout, with the one exception that, under the names of the chemical compounds, the properties of the compounds are listed first and are followed by the systems (the second component being in italics) of which this compound is one component.

In systems of two or more components the *main entry* under which the data appears is the compound which would appear first in an alphabetical arrangement, without regard to the percentage composition or to the manner in which the systems are listed in the Tables. Thus data for a solution of acenaphthene in acetone will be found under acenaphthene, while those for a solution of naphthalene in acetone will be found under acetone.

According to the plan adopted for this Index, the data for a given system are listed only once, and as it is often desirable to know all the systems in which a specified compound appears there are given, after the properties of each compound, cross references to the system of which it is a component, but which, according to the alphabetical arrangement, appear in the earlier part of the Index. These cross references are in italics and carry an asterisk (*) after the component under which, in the main alphabet, the data will be found. Following the cross references are data for all other systems of which this compound is the first alphabetical component. For example, under ethyl alcohol are given, after the properties of the pure substance, nearly three columns of cross references to systems containing ethyl alcohol, for which data will be found in the main alphabet under the name carrying the *. Thus the entry, *-Acenaphthene** (which appears under ethyl alcohol) refers to the system acenaphthene-ethyl alcohol, the data for which will be found in the Index under acenaphthene. Following these cross references are all the other systems containing ethyl alcohol, with references to the place where data for these systems may be found in the Tables.

Contents: The items included in the Index are:

1. All chemical compounds and systems given in the Tables, with their properties, except in the following cases: Refractive index of organic compounds (VII: 34-62); optical rotatory power of organic compounds (VII: 356-488); absorption spectra of organic compounds and dyes (V: 320-358; VII: 173-211); electrical conductivity of weak electrolytes in aqueous solution (VI: 259-304); data on 3,359 inorganic compounds and 6,175 organic compounds (I: 106-338). The compounds listed in these sections appear in the Index only if other properties are given in the Tables. These compounds are omitted because the tables in which they appear are so arranged as to enable the user readily to determine whether or not a given compound is listed and also because it was felt that the inclusion of thousands of names of complex organic compounds was not warranted in view of the tremendous increase in size and consequent cost of the Index.

2. All industrially important compounds and materials with their properties. Many of these are listed under their trade names.

3. All minerals, rocks and miscellaneous materials, with their properties.

4. The names of various effects, equations, formulas, etc.

5. General properties and characteristics of chemical compounds and materials, such as boiling point, compressibility, melting point, refractive index, etc.

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CLARENCE J. WEST.

WASHINGTON, D. C.,
March, 1933.

TRENT UNIVERSITY
DEPT. OF CHEMISTRY

INTERNATIONAL CRITICAL TABLES

ERRATA

(June, 1931)

Since the preparation of the errata sheets which were distributed with the volumes of International Critical Tables, the following additional errata should be noted:

VOLUME I

PAGE

80 Note below table. *For* see p. 78 *read* see p. 75.

128 No. 1325. *For* TiO *read* TiO₂.

PAGE

134 No. 1733. *For* U₂O₃ *read* UO₃ and *for* 6844.60 *read* 3986.6.

VOLUME II

PAGE

55 Thermal conductivity. *For* sec⁻¹ (°C, cm⁻¹) *read* sec⁻¹ / (°C, cm⁻¹).

130 Next to last line of text. *For* following table *read* Table 1.

151 Column 2, table head. *For* d_k/d_t *read* dk/dt .

152 Third column head of second table. *For* $\frac{\text{kg-cal per g}}{A}$ *read* kg-cal per g. The numerical values in the column are values of A.

157 Fig. 12. *For* dyne cm *read* dyne/cm.

161 Table heads. *For* Flash point *read* Flash point, °C.

379 Index Nos. 908 and 909. *For* 408 *read* 480.

PAGE

413 Insert (3.2) Charpy, 34, 126: 1569; 98.

413 Pb-Bi-Sn. *For* (32) *read* (3.2).

416 Sn-Bi eutectic. *For* 58 *read* 56.

418 Pb-Sn-Bi diagram.
For (32) *read* (3.2).

For $e_1 = 136^\circ$ *read* 125° .

For $e_2 = 124^\circ$ *read* 135° .

For $e_3 = 183^\circ$ *read* 181° .

462 Footnote.* *For* α_t *read* α_i .

462 Pt, 1000°. *For* (15) *read* (74).

VOLUME III

PAGE

4 pv equation for H₂ at -207.9°F. The pressure unit is m Hg.
For p^5 *read* p^4 .

6 pv equations for He at -258° to -183°C inclusive. The pressure unit is m Hg.

8 pv equation for Ne at -207.9°C. The pressure unit is m Hg. *For* p^4 *read* p^3 .

PAGE

12-13 In all tables based on (62), $pv = 1.0000$ at 0°C. and 0 atm.

26 Table 3. Reference. *For* ;18 *read* ;03.

43 Al₂O₃. *Delete* (15).

436 (40). *For* ;93 *read* ;92.

VOLUME IV

PAGE

323 System H₂O + NH₄NO₃ + CaSO₄. The data for 25° are in g/l.

PAGE

324 System H₂O + CaSO₄ + CaNO₃. *For* % in both columns *read* % $\times 10^{-1}$.

VOLUME V

PAGE

83 CO₂ Equation at head of table. *For* C_p *read* C_v .

133 C₆H₁₂O. *For* 17.55 *read* 175.5 and *for* 1.756 *read* 17.56.

163 Line 1. *For* 75.6e *read* 41.4e.

PAGE

Lines 5 to 8. *Change the values of* c , d , g , and i *to* -5.65, +5.27, +15.61 and +139.1, *resp.*

209 Insert (603.5) Lange and Durr, 7, 118: 129; 25.

361 Fig. 1. *For* 2883 *read* 2083.

VOLUME VI

PAGE

19 Line 2 of Table 10 head matter. *For* m_0 *read* m_0^2 .

230 Table 1, Col. 4. *For* 0.6531 *read* 0.06531; and *for* .007742, *read* .0007742.

259 Equation 1. *Insert* c in numerator.

PAGE

279 k for benzoic acid. *For* 10^{-4} *read* 10^{-5} . k for salicylic acid *for* 10^{-4} *read* 10^{-2} and *for* 10^{-5} *read* 10^{-3} .

467 (64). *For* 12: 566; 88 *read* 4: appendix; 86 and *for* ;92 *read* ;93.

VOLUME VII

PAGE

351 (1104). *For* 50 *read* 52.

PAGE

486 (2197). *For* 41: 161; 02 *read* 45: 331; 03.

INDEX VOLUME

PAGE

1, 11, 21, 30. In second column of table add the items Woods and Explosives.

PAGE

9 Spectra, Band. *For* 4: *read* 5:.

PASTE ON INSIDE COVER

Key Numbers of Elements

Ag	Al	As	Au	B Ba Be Bi Br					C Ca Cb Cd Ce					Cl Co Cr Cs Cu					Dy Er Eu F Fe					Ga Gd Ge Gl H					Hf Hg Ho I In					Ir K La Li Lu									
32	55	13	33	54	79	75	15	5	16	77	51	29	59	4	44	46	85	31	67	69	64	3	43	25	65	20	75	2	73	30	68	6	26	36	83	58	81	72					
Mg	Mn	Mo	N	Na Nb Nd Ni O					Os P Pb Pd					Pr Pt Ra Rb					Rh Ru S Sa					Sb Sc Se Si Sn					Sr Ta Tb Te Th					Ti Tl Tm U V					W Y Yb Zn Zr				
76	42	47	11	82	51	61	45	1	35	12	23	41	60	37	80	84	40	39	8	63	14	56	9	18	22	78	52	66	10	24	19	27	70	49	50	48	57	71	28	21			

INDEX

A alloy, 2: 370, 538, 608
Abaca fiber, 2: 235, 236
Abbreviations, general list, 1: 16
Abel stability test (explosives), 7: 489
Aberration constant, 1: 18
 Definition, 1: 34
Abrasive materials, 2: 86
Absorption
 Alpha particles, 1: 369
 Beta particles, 6: 61
 Coefficients of
 Definition, 1: 34; 6: 11
 Conversion factors, 1: 20
 Dielectric, 6: 97
 Electronic radiation, 6: 61
 Gamma rays, 6: 14, 20, 21
 Heat of, 5: 139
 Index of
 Definition, 1: 34
 Electric waves, 6: 97
 Light. *See* Transmission.
 Primary electrons, 6: 61
 Radiant energy. *See* Transmission of radiation.
 Sound, 6: 458
 Vapors by rubber, 2: 269
 Water by plastics, 2: 298
 X-rays, 6: 8
Absorption limits, X-rays, 6: 23
Absorption spectra
 Dyes, 7: 173
 Liquids and vapors, 5: 326
 Solutions, 5: 326, 359
Absorptivity, definition, 1: 34
Abyssinia, weights and measures, 1: 2
Abyssinian gold, 2: 370
Acanthite
 Density, 1: 124
 Photoconductivity, 6: 66
 Transformation temperature, 1: 124
See also Silver sulfide.
Acceleration
 Angular, conversion factors, 1: 23
 Conversion factors, 1: 23
Accelerators of vulcanization, 2: 278
Accommodation coefficient, 5: 53
Accumulator metal, 2: 370; *cf.* 467, 557
Acenaphthene
 Absorption spectra, 5: 348
 Boiling point, 3: 227
 Crystallography, 1: 331
 Dielectric constant, 6: 96
 Heat of combustion, 5: 164
 Refractive index, 7: 56
 Surface tension, 4: 461
 Vapor pressure, 3: 227
 -Acetone
 Freezing point-solubility, 4: 174
 -Aniline
 Freezing point-solubility, 4: 178
 -Benzene
 Density, 3: 181
 -Benzil
 Freezing point-solubility, 4: 160
 -Bromoacenaphthene
 Freezing point-solubility, 4: 180
 -Butyl alcohol
 Freezing point-solubility, 4: 115
 -Carbon disulfide
 Freezing point-solubility, 4: 172
 -Carbon tetrachloride
 Freezing point-solubility, 4: 172

Acenaphthene.—(Continued)
 -Chloroacenaphthene
 Freezing point-solubility, 4: 180
 -Chlorobenzene
 Freezing point-solubility, 4: 176
 -Chloroform
 Boiling point elevation, 3: 332
 Density, 3: 148
 Freezing point-solubility, 4: 172
 Heat of solution, 5: 151
 -Cinnamylideneacetophenone
 Freezing point-solubility, 4: 160
 -Dinitrobenzene (*o*-, *m*-, *p*-)
 Freezing point-solubility, 4: 125, 176
 -2, 4-Dinitrophenol
 Freezing point-solubility, 4: 126
 -2, 4-Dinitrotoluene
 Freezing point-solubility, 4: 147
 -2, 6-Dinitrotoluene
 Freezing point-solubility, 4: 148
 -3, 4-Dinitrotoluene
 Freezing point-solubility, 4: 148
 -3, 5-Dinitrotoluene
 Freezing point-solubility, 4: 148
 -Ethyl acetate
 Density, 3: 167
 -Ethyl alcohol
 Boiling point elevation, 3: 337
 Density, 3: 161
 Freezing point-solubility, 4: 110
 Heat of solution, 5: 152
 -Ethyl ether
 Density, 3: 168
 -Fluorene
 Freezing point-solubility, 4: 180
 -Hexane
 Density, 3: 186
 -Indene
 Freezing point-solubility, 4: 180
 -Iodoacenaphthene
 Freezing point-solubility, 4: 180
 -Methyl alcohol
 Boiling point elevation, 3: 334
 Density, 3: 152
 Freezing point-solubility, 4: 100
 Heat of solution, 5: 152
 -p-Nitrobenzaldehyde
 Freezing point-solubility, 4: 145
 -Nitrobenzene
 Density, 3: 177
 Freezing point-solubility, 4: 177
 -o-Nitrophenol
 Freezing point-solubility, 4: 129
 -m-Nitrophenol
 Freezing point-solubility, 4: 130
 -p-Nitrophenol
 Freezing point-solubility, 4: 132
 -Picramide
 Freezing point-solubility, 4: 127
 -Picric acid
 Freezing point-solubility, 4: 121
 -Picryl chloride
 Freezing point-solubility, 4: 117
 -Piperonal
 Freezing point-solubility, 4: 152
 -Propyl alcohol
 Boiling point elevation, 3: 340
 Density, 3: 164
 Freezing point-solubility, 4: 112
 Heat of solution, 5: 153
 -Pyridine
 Freezing point-solubility, 4: 174

Acenaphthene.—(Continued)
 -p-Quinone
 Freezing point-solubility, 4: 127
 -Styphnic acid
 Freezing point-solubility, 4: 122
 -Toluene
 Boiling point elevation, 3: 346
 Density, 3: 188
 Dielectric constant, 6: 103
 Freezing point-solubility, 4: 179
 Heat of solution, 5: 154
 -1, 3, 5-Trinitrobenzene
 Freezing point-solubility, 4: 119
 -2, 4, 6-Trinitrotoluene
 Freezing point-solubility, 4: 146
 -Vanillin
 Freezing point-solubility, 4: 153
Acenaphthylene
 Crystallography, 1: 331
 -Picric acid
 Freezing point-solubility, 4: 121
 -Picryl chloride
 Freezing point-solubility, 4: 117
Acetal
 Absorption spectra, 5: 340
 Birefringence, electric, 7: 111
 Dielectric constant, 6: 91
 Diffusion in ethyl alcohol, 5: 74
 Diffusion in methyl alcohol, 5: 73
 Freezing point lowering of aqueous solution, 4: 263
 Heat of vaporization, 5: 137
 Magnetic susceptibility, 6: 362
 Refractive index, 7: 40
 Solubility in water, 3: 390
 Specific heat, 5: 110
 Surface tension, 4: 455
 Viscosity, 5: 41
 -Ethyl alcohol
 Viscosity, 5: 38
 -Ethyl ether
 Viscosity, 5: 41
 -Magnesium iodide
 Freezing point-solubility, 4: 204
Acetaldehyde
 Absorption spectra, 5: 331, 335
 Ultra-violet, 5: 365, 374, 376, 377
 Boiling point, 3: 216, 335
 Aqueous solution, 3: 310
 Bromine, oxidation by, 7: 146
 Critical temperature, 3: 248
 Density, aqueous solution, 3: 112, 113
 Dielectric constant, 6: 84
 Gas, 6: 82
 Electrical conductivity, 6: 143
 Aqueous solution, 6: 262
 Heat of combustion, 5: 167
 Heat of solution in water, 5: 148
 Heat of vaporization, 5: 136
 Inflammability, limits of, 2: 180
 Ionization by α -particles, 6: 122
 Ionization by β -particles, 6: 121
 Ionization by γ -rays, 6: 123
 Ions, mobility of, in, 6: 112
 Magnetic rotatory power, 6: 428
 Magnetic susceptibility, 6: 361
 Photochemical decomposition, 7: 168
 Photochemical hydrolysis, 7: 163
 Polarization of light scattered by, 5: 266
 Refractive index
 Gas, 7: 10
 Liquid, 7: 12, 80

Acetaldehyde.—(Continued)

- Solubility in vegetable oils, **3**: 269
- Specific heat, gas, **5**: 80
- Surface tension, **4**: 448
 - Aqueous solution, **4**: 467
- Vapor pressure, **3**: 216
- Verdet constant, **6**: 428
- Viscosity, liquid, **5**: 36; **7**: 213
- X-ray diffraction bands, **1**: 351
- Acetaldehyde ammonia
 - Boiling point elevation, **3**: 335
- Acetic acid
 - Boiling point, **3**: 313
 - Aqueous solution, **3**: 316
- Benzene
 - Density, **3**: 156
- Benzophenone
 - Boiling point elevation, **3**: 335
- l-Borneol
 - Boiling point elevation, **3**: 335
- Chloroform
 - Heat of solution, **5**: 155
- Ethyl alcohol
 - Boiling point, **3**: 313
 - Density, **3**: 155
 - Freezing point-solubility, **4**: 108
 - Heat of solution, **5**: 156
 - Refractive index, **7**: 80
 - Vapor pressure, **3**: 287
 - Viscosity, **5**: 36
- Ethyl ether
 - Heat of solution, **5**: 156
- Metaldehyde
 - Vapor pressure, **3**: 360
- Paraldehyde
 - Freezing point-solubility, **4**: 108
 - Vapor pressure, **3**: 360
- Acetaldehyde ammonia**
 - Freezing point lowering of aqueous solution, **4**: 262
 - Rubber vulcanization, use in, **2**: 280
- Acetaldehyde*
 - α -Acetaldehydophenylhydrazone
 - Absorption spectra, **5**: 343
 - β -Acetaldehydophenylhydrazone
 - Freezing point-solubility, **4**: 154
- Acetaldoxime**
 - Absorption spectra, **5**: 335
 - Dielectric constant, **6**: 85
 - Refractive index, **7**: 34
 - Surface tension, **4**: 449
- Acetalization**, dynamics of, **7**: 140
- Acetamide**
 - Absorption spectra, **5**: 335, 364
 - Allotropic forms, **4**: 14
 - Boiling point elevation in aqueous solution, **3**: 327
 - Compressibility differences, **4**: 14
 - Cryoscopic constant, **4**: 183
 - Crystallography, **1**: 324
 - Density, **3**: 28
 - Aqueous solution, **3**: 112, 113
 - Dielectric constant, **6**: 85
 - Aqueous solution, **6**: 100
 - Diffusion in ethyl alcohol, **5**: 73
 - Diffusion in methyl alcohol, **5**: 72
 - Diffusion in water, **5**: 70
 - Electrical conductivity, **6**: 143
 - Aqueous solution, **6**: 262
 - Freezing point lowering of aqueous solution, **4**: 262
 - Heat of combustion, **5**: 167
 - Heat of solution in water, **5**: 148
 - Hydrolysis, kinetics of, **7**: 140
 - Magnetic susceptibility, **6**: 361
 - Melting point under pressure, **4**: 14
 - Solubility in water, **4**: 251
 - Specific heat, aqueous solution, **5**: 124
 - Surface tension, **4**: 449
 - Aqueous solution, **4**: 467
 - Triple point, **4**: 14

Acetamide.—(Continued)

- Viscosity
 - Aqueous solution, **5**: 22
 - Liquid, **7**: 214
- Volume change on melting, **4**: 14
- Acetic acid
 - Freezing point-solubility, **4**: 108
- Acetic acid-Acetic anhydride-Acetonitrile
 - Freezing point-solubility, **4**: 428
- Acetic anhydride
 - Freezing point-solubility, **4**: 109
- Acetone
 - Boiling point elevation, **3**: 338
- Acetonitrile
 - Boiling point elevation, **3**: 334
- Benzoic acid
 - Freezing point-solubility, **4**: 109
- Benzoic anhydride
 - Freezing point-solubility, **4**: 110
- Bromine
 - Freezing point lowering, **4**: 36
- Camphor
 - Freezing point-solubility, **4**: 109
- Catechol
 - Freezing point-solubility, **4**: 109
- Chloroform
 - Boiling point elevation, **3**: 331
- Ethyl alcohol
 - Boiling point elevation, **3**: 336
 - Density, **3**: 158
 - Dielectric constant, **6**: 102
 - Freezing point-solubility, **4**: 174
 - Heat of solution, **5**: 152
 - Vapor pressure lowering, **3**: 300
- Ethyl alcohol-Phenol
 - Freezing point-solubility, **4**: 167
- Ethyl nitrate
 - Density, **3**: 158
- Glucose
 - Viscosity, aqueous solution, **5**: 24
- Hydroquinol
 - Freezing point-solubility, **4**: 109
- Magnesium bromide
 - Freezing point-solubility, **4**: 203
- Magnesium iodide
 - Freezing point-solubility, **4**: 204
- Methyl alcohol
 - Boiling point elevation, **3**: 333
- Naphthol (α -, β -)
 - Freezing point-solubility, **4**: 109
- Nitromethane
 - Boiling point elevation, **3**: 333
- Nitrophenol (o -, m -, p -)
 - Freezing point-solubility, **4**: 109
- Nitrosodimethylaniline
 - Freezing point-solubility, **4**: 109
- Phenol
 - Freezing point-solubility, **4**: 109
- Phthalide
 - Freezing point-solubility, **4**: 109
- Propionitrile
 - Boiling point elevation, **3**: 338
- Pyridine
 - Density, **3**: 158
 - Viscosity, **5**: 37
- Pyrogallol
 - Freezing point-solubility, **4**: 109
- Resorcinol
 - Freezing point-solubility, **4**: 109
- Salicylic acid
 - Freezing point-solubility, **4**: 109
- Triphenylguanidine
 - Freezing point-solubility, **4**: 110
- Urethan
 - Freezing point-solubility, **4**: 174
- Acetanilide**
 - Absorption spectra, **5**: 343
 - Boiling point elevation in aqueous solution, **3**: 327
 - Cryoscopic constant, **4**: 183
 - Crystallography, **1**: 328

Acetanilide.—(Continued)

- Density, **3**: 29
- Dielectric constant, **6**: 93
- Diffusion in methyl alcohol, **5**: 73
- Heat of combustion, **5**: 168
- Hydrogen ion, reaction with, **7**: 246
- Hydrolysis, kinetics of, **7**: 141
- Solubility in water, **3**: 392
- Surface tension, **4**: 457
- Verdet constant, **6**: 429
- Viscosity, **7**: 219
- Acetic acid
 - Boiling point elevation, **3**: 335
- Acetone
 - Boiling point elevation, **3**: 339
 - Density, **3**: 163
- Acetone-Carbon disulfide
 - Vapor pressure, **3**: 375
- Amyl acetate
 - Density, **3**: 189
- Aniline
 - Density, **3**: 185
- Anisole
 - Boiling point elevation, **3**: 346
- Antipyrine
 - Freezing point-solubility, **4**: 153
- Benzaldehyde
 - Density, **3**: 186
- Benzene
 - Boiling point elevation, **3**: 344
 - Density, **3**: 180
 - Distribution coefficients in water, **3**: 431
 - Freezing point-solubility, **4**: 134
- Chloroform
 - Boiling point elevation, **3**: 331
 - Density, **3**: 147
 - Distribution coefficients in water, **3**: 431
 - Heat of solution, **5**: 151
 - Vapor pressure, **3**: 360
- Chloroform-Ethyl ether
 - Vapor pressure, **3**: 375
- m-Dinitrobenzene
 - Freezing point-solubility, **4**: 176
- 2, 4-Dinitrophenol
 - Freezing point-solubility, **4**: 176
- Ethyl alcohol
 - Boiling point elevation, **3**: 337
 - Density, **3**: 160
 - Aqueous solution, **3**: 128
 - Dielectric constant, **6**: 102
 - Freezing point-solubility, **4**: 174
 - Heat of solution, **5**: 152
- Ethyl alcohol-Water
 - Vapor pressure, partial, **3**: 291
- Ethyl bromide
 - Boiling point elevation, **3**: 335
- Ethyl ether
 - Boiling point elevation, **3**: 341
 - Distribution coefficients in water, **3**: 431
- Ethyl iodide
 - Boiling point elevation, **3**: 336
- Ethylene chloride
 - Boiling point elevation, **3**: 335
- Isobutyl bromide
 - Boiling point elevation, **3**: 341
- Magnesium bromide
 - Freezing point-solubility, **4**: 203
- Methyl alcohol
 - Boiling point elevation, **3**: 334
 - Density, **3**: 151
 - Dielectric constant, **6**: 102
 - Freezing point-solubility, **4**: 173
 - Heat of solution, **5**: 152
- m-Nitroaniline
 - Freezing point-solubility, **4**: 178
- Nitrobenzene
 - Boiling point elevation, **3**: 343

* Data for system will be found under this compound in Index. Full explanation on page vii.

Acetanilide.—(Continued)

- Phenol
 - Freezing point-solubility, 4: 136
 - Propyl bromide
 - Boiling point elevation, 3: 340
 - Sulfur dioxide
 - Boiling point elevation, 3: 328
 - Toluene
 - Density, 3: 187
 - Urethan
 - Freezing point-solubility, 4: 174
 - Xylene
 - Density, 3: 191
- Acetic acid**
- Absorption spectra, 5: 331, 335
 - Ultra-violet, 5: 364, 371, 375, 376, 377
 - Activity coefficient, 7: 245
 - Adsorption by charcoal, 3: 251
 - Allotropic forms, 4: 14
 - Angle of contact, 4: 434
 - Azeotropic mixtures, 3: 319
 - Birefringence, electric, 7: 110
 - Boiling point, 3: 217, 335
 - Aqueous solution, 3: 310
 - Compressibility, 3: 39
 - Aqueous solution, 3: 440
 - Condensation on ions and nuclei, 6: 117
 - Critical point data, 3: 238, 248
 - Cryoscopic constant, 4: 183, 215
 - Density, 3: 28, 33
 - Aqueous solution, 3: 112, 123
 - Dielectric absorption, 6: 84
 - Dielectric constant, 6: 84
 - Diffusion in benzene, 5: 74
 - Diffusion in methyl alcohol, 5: 72
 - Diffusion in water, 5: 69
 - Diffusion of vapor in gases, 5: 62
 - Electrical conductivity, 6: 143
 - Aqueous solution, 6: 262
 - Esterification constant, 7: 138
 - Esters, optical rotatory power, 7: 361
 - Freezing point lowering of aqueous solution, 4: 262
 - Heat of combustion, 5: 165
 - Heat of formation, 5: 181
 - Heat of fusion, 5: 132
 - Heat of solution in water, 5: 148, 159
 - Heat of vaporization, 5: 136, 138
 - Heat of wetting by, 5: 142
 - Magnetic rotatory power, 6: 428
 - Aqueous solution, 4: 431
 - Magnetic susceptibility, 6: 361
 - Aqueous solution, 6: 364
 - Melting point, 4: 6
 - Melting point under pressure, 4: 14
 - Orthobaric density, 3: 238
 - Polarization of light scattered by, 5: 266
 - Polymerization, equilibrium constant of, 7: 246
 - Pressure-volume relations for gas, 3: 437
 - Refractive index, 7: 12, 34, 80
 - Aqueous solution, 7: 67
 - × Solubility in water, 4: 251
 - Solubility of acetates in, 4: 207
 - Sound, velocity of, in vapor, 6: 463
 - Specific heat
 - Aqueous solution, 5: 115
 - Gas, 5: 80, 81
 - Liquid, 5: 114
 - Solid, 5: 102
 - Surface tension, 4: 448
 - Aqueous solution, 4: 467
 - Thermal conductivity, 5: 228
 - Aqueous solution, 5: 227
 - Triple point, 4: 14
 - Vapor pressure
 - Aqueous solution, 3: 306
 - Liquid, 3: 217; 7: 245
 - Solid, 3: 208
 - Vapor pressure above 1 atm., 3: 238

Acetic acid.—(Continued)

- Verdet constant, 6: 426
- Dispersion, 6: 433, 434
- Viscosity
 - Aqueous solution, 5: 20
 - Liquid, 5: 27, 33; 7: 213
- Volume change on melting, 4: 14
- Acetaldehyde*
 - Acetamide*
 - Acetamide*-Acetic anhydride-Acetonitrile
 - Acetanilide*
 - Acetic anhydride
 - Density, 3: 156
 - Freezing point-solubility, 4: 108
 - Viscosity, 5: 36
 - Acetic anhydride-Acetylbenzoylimide-Benzamide
 - Freezing point-solubility, 4: 428
 - Acetic anhydride-Acetylbenzoylimide-Benzamide-Benzonitrile
 - Freezing point-solubility, 4: 429
- Acetone
 - Density, 3: 156
 - Heat of solution, 5: 152
 - Viscosity, 5: 36
- Acetophenone
 - Density, 3: 157
 - Viscosity, 5: 37
- m-Aminobenzoic acid
 - Density, aqueous solution, 3: 126
 - Freezing point-solubility in water, 4: 402
- Ammonium acetate
 - Density, aqueous solution, 3: 101
- Ammonium butyrate
 - Density, aqueous solution, 3: 101
- Ammonium formate
 - Density, aqueous solution, 3: 101
- Ammonium isobutyrate
 - Density, aqueous solution, 3: 101
- Amyl alcohol
 - Distribution coefficients in water, 3: 424
- Aniline
 - Density, 3: 156
 - Aqueous solution, 3: 125
 - Freezing point-solubility, 4: 108
 - Heat of solution, 5: 152
 - Miscibility in water, 3: 417
 - Refractive index, 7: 80
 - Viscosity, 5: 37
- Anthracene
 - Boiling point elevation, 3: 335
 - Freezing point-solubility, 4: 174
- Anthraquinone
 - Freezing point-solubility, 4: 174
- Antimony tribromide
 - Freezing point-solubility, 4: 194
- Antimony trichloride
 - Freezing point-solubility, 4: 190
- Asparagine
 - Density, aqueous solution, 3: 125
- Aspartic acid
 - Density, aqueous solution, 3: 125
- Azobenzene
 - Boiling point elevation, 3: 335
 - Density, 3: 157
- Barium acetate
 - Boiling point elevation, 3: 335
 - Freezing point-solubility in water, 4: 374, 403
- Barium oxalate
 - Solubility in water, 7: 344
- Barium tartrate
 - Solubility in water, 7: 344
- Benzaldehyde
 - Distribution coefficients in water, 3: 424
- Benzamide
 - Freezing point-solubility, 4: 108

Acetic acid.—(Continued)

- Benzanilide
 - Boiling point elevation, 3: 335
- Benzene
 - Boiling point, 3: 313
 - Compressibility, 3: 440
 - Density, 3: 156
 - Aqueous solution, 3: 125
 - Distribution coefficients in water, 3: 424
 - Freezing point-solubility, 4: 108
 - Freezing point-solubility in water, 3: 404; 4: 402
 - Heat of solution, 5: 152, 156, 158
 - Magnetic susceptibility, 6: 364
 - Miscibility in water, 3: 410
 - Refractive index, 7: 80
 - Dispersion, 7: 103
 - Surface tension, 4: 472
 - Vapor pressure, partial, 3: 287
 - Viscosity, 5: 37
- Benzene-Ethyl iodide
 - Surface tension, 4: 474
- Benzil
 - Boiling point elevation, 3: 335
- Benzoic acid
 - Boiling point elevation, 3: 335
 - Freezing point-solubility, 4: 173
- Benzoin
 - Boiling point elevation, 3: 335
- Bismuth acetate
 - Boiling point elevation, 3: 335
- Boric acid
 - Freezing point-solubility in water, 4: 374
- Bromobenzene
 - Density, 3: 156
- p-Bromobenzoic acid
 - Boiling point elevation, 3: 335
- Bromoform
 - Distribution coefficients in water, 3: 423
- Bromonaphthalene
 - Solubility, mutual, 3: 397
- Butyl bromide
 - Density, 7: 80
 - Refractive index, 7: 80
 - Dispersion, 7: 103
- Butyric acid
 - Density, 3: 156
 - Vapor pressure, 3: 287
- Butyric acid-Capric acid
 - Vapor pressure, 3: 292
- Butyric acid-Valeric acid
 - Vapor pressure, 3: 292
- Calcium acetate
 - Boiling point elevation, 3: 335
- Calcium acetate-Potassium tartrate
 - Freezing point-solubility in water, 4: 374
- Calcium chloride
 - Freezing point-solubility, 4: 204
- Calcium oxalate
 - Solubility in water, 7: 342
- Calcium sulfate-Potassium acetate
 - Freezing point-solubility in water, 4: 336
- Calcium tartrate
 - Solubility in water, 7: 342
- Camphor
 - Density, 3: 157; 7: 81
 - Refractive index, 7: 81
- Carbazole
 - Freezing point-solubility, 4: 174
- Carbon disulfide
 - Density, 3: 144; 7: 77
 - Distribution coefficients in water, 3: 423
 - Freezing point-solubility, 4: 98
 - Refractive index, 7: 77
 - Dispersion, 7: 102
 - Verdet constant, 6: 427

* Data for system will be found under this compound in Index. Full explanation on page vii.

Acetic acid.—(Continued)*-Carbon tetrachloride*Density, **3**: 143; **7**: 77Distribution coefficients in water, **3**: 423Heat of solution, **5**: 151Refractive index, **7**: 77Dispersion, **7**: 102Surface tension, **4**: 471Verdet constant, **6**: 427*-Chloroacetic acid*Freezing point-solubility, **4**: 106, 173*-Chlorobenzene*Density, **3**: 156Freezing point-solubility, **4**: 109*-Chloroform*Compressibility, **3**: 440Density, **3**: 146; **7**: 78Distribution coefficients in water, **3**: 424Heat of solution, **5**: 151Miscibility in water, **3**: 410Refractive index, **7**: 78Dispersion, **7**: 103Surface tension, **4**: 471*-Colchicine*Boiling point elevation, **3**: 335*-Colchicine*Boiling point elevation, **3**: 335*-Cottonseed oil*Solubility, mutual, **3**: 395*-Cupric acetate*Density, aqueous solution, **3**: 102*-Cyclohexane*Freezing point-solubility, **4**: 109Heat of solution, **5**: 156*-Decalin*Distribution coefficients in water, **3**: 424*-2, 4-Dichloroacetanilide*Freezing point-solubility in water, **4**: 402*-Dichloroacetic acid*Density, aqueous solution, **3**: 125Freezing point-solubility, **4**: 105*-Diethyl monobenzoyletartrate*Density, **3**: 157*-Diethyl monotoluyltartrate (o-, m-, p-)*Density, **3**: 157*-Dimethyl oxalate*Freezing point-solubility, **4**: 173*-Dimethyl succinate*Freezing point-solubility, **4**: 173*-Dimethylaniline*Freezing point-solubility, **4**: 108*-Dimethylpyrone*Freezing point-solubility, **4**: 108*-Diphenylamine*Boiling point elevation, **3**: 335*-Epichlorohydrin*Miscibility in water, **3**: 411*-Ethyl acetate*Density, **3**: 156Distribution coefficients in water, **3**: 424Freezing point-solubility, **4**: 108Heat of solution, **5**: 152Viscosity, **5**: 36*-Ethyl alcohol*Density, **3**: 156Freezing point-solubility, **4**: 108Heat of solution, **5**: 152*-Ethyl alcohol-Turpentine*Density, **3**: 197*-Ethyl benzoate*Density, **3**: 157Viscosity, **5**: 37*-Ethyl bromide*Density, **3**: 156*-Ethyl diacetylglycerate*Density, **3**: 157**Acetic acid.—(Continued)***-Ethyl ether*Density, **3**: 156Distribution coefficients in water, **3**: 424Freezing point-solubility, **4**: 108Heat of solution, **5**: 152Miscibility in water, **3**: 410Viscosity, **5**: 36*-Ethyl ether-Glycerol*Density, **3**: 197*-Ethyl iodide*Surface tension, **4**: 472*-Ethyl nitrate*Density, **3**: 156*-Ethylene bromide*Density, **3**: 154Freezing point-solubility, **4**: 107Heat of solution, **5**: 159Surface tension, **4**: 471*-Ethylene chloride*Density, **3**: 155; **7**: 80Refractive index, **7**: 80Dispersion, **7**: 103*-Ferric chloride*Magnetic susceptibility, **6**: 364*-Fluoran*Boiling point elevation, **3**: 335*-Fluorene*Freezing point-solubility, **4**: 109*-Formamide*Density, **3**: 149Freezing point-solubility, **4**: 99Viscosity, **5**: 33*-Formic acid*Density, **3**: 148Freezing point-solubility, **4**: 99Heat of solution, **5**: 155Specific heat, **5**: 126Surface tension, **4**: 471Viscosity, **5**: 33*-Glycerol*Specific heat, **5**: 126*-Heptane*Heat of solution, **5**: 152*-Hexane*Density, **3**: 157*-Hydrogen chloride*Density, aqueous solution, **3**: 101*-Hydroquinone*Density, aqueous solution, **3**: 125*-Iodine*Solubility in water, **4**: 266*-Isobutyl alcohol*Heat of solution, **5**: 152*-Isobutyric acid*Heat of solution, **5**: 156Specific heat, **5**: 126Viscosity, **5**: 36*-Kerosene*Distribution coefficients in water, **3**: 424Solubility, mutual, **3**: 395*-Lactic acid*Heat of solution, **5**: 156Specific heat, **5**: 126*-Lead acetate*Boiling point elevation, **3**: 335Freezing point-solubility in water, **4**: 403*-Lead chloride*Freezing point-solubility in water, **4**: 403; **7**: 315*-Lead oxide*Freezing point-solubility in water, **4**: 402*-Lead tetraacetate*Boiling point elevation, **3**: 335*-Lithium acetate*Boiling point elevation, **3**: 335*-Magnesium bromide*Freezing point-solubility, **4**: 203**Acetic acid.—(Continued)***-Magnesium hydroxide*Freezing point-solubility in water, **4**: 374*-Magnesium iodide*Freezing point-solubility, **4**: 203*-Magnesium oxide*Freezing point-solubility in water, **4**: 403*-Mandelic acid*Freezing point-solubility in water, **4**: 402*-Mercuric acetate*Freezing point-solubility, **4**: 199*-Mercuric chloride*Freezing point-solubility, **4**: 198*-Mercurous acetate*Freezing point-solubility in water, **4**: 403*-Methyl alcohol*Density, **3**: 150; **7**: 79Freezing point-solubility, **4**: 100Heat of solution, **5**: 151Refractive index, **7**: 79*-d-Methyl dibenzoylglycerate*Density, **3**: 157*-Molybdenum trioxide*Density, aqueous solution, **3**: 102Refractive index, aqueous solution, **7**: 92*-Naphthalene*Freezing point-solubility, **4**: 109Freezing point-solubility in water, **4**: 402Heat of solution, **5**: 152*-β-Naphthylamine*Freezing point-solubility, **4**: 109*-Nicotine*Density, **3**: 157Aqueous solution, **3**: 126*-Nitric acid*Density, aqueous solution, **3**: 101*-p-Nitroacetanilide*Freezing point-solubility in water, **4**: 402*-Nitrobenzene*Density, **3**: 156Distribution coefficients in water, **3**: 424Freezing point-solubility, **4**: 108, 109*-Nitrogen tetroxide*Boiling point elevation, **3**: 329*p-Nitrophenol*Boiling point elevation, **3**: 335*-Nitroso-β-naphthol*Freezing point-solubility in water, **4**: 402*-Oxalic acid*Freezing point-solubility in water, **4**: 401*-Paraldehyde*Density, **3**: 157Viscosity, **5**: 37*-Phenacetine*Density, **3**: 157*-Phenanthrene*Freezing point-solubility, **4**: 109*-Phenol*Freezing point-solubility, **4**: 173Heat of solution, **5**: 152*-Phenyl salicylate*Density, **3**: 157*-o-Phenylenesuccinamide*Boiling point elevation, **3**: 335*-Phosgene*Boiling point elevation, **3**: 330*-Phthalic acid*Freezing point-solubility in water, **4**: 402*-Picric acid*Boiling point elevation, **3**: 335Freezing point-solubility, **4**: 108

Acetic acid.—(Continued)

- Potassium acetate*
Boiling point elevation, **3**: 335
Density, aqueous solution, **3**: 103
- Potassium butyrate*
Density, aqueous solution, **3**: 103
- Potassium formate*
Density, aqueous solution, **3**: 103
- Potassium isobutyrate*
Density, aqueous solution, **3**: 103
- Propionic acid*
Density, **3**: 156
- Propyl alcohol*
Freezing point-solubility, **4**: 108
Heat of solution, **5**: 152
- Propylene bromide*
Density, **3**: 156
- Pyridine*
Density, **3**: 156
Heat of solution, **5**: 152
Refractive index, **7**: 80
Surface tension, **4**: 472
Vapor pressure, **3**: 287
Viscosity, **5**: 36
- Salicylic acid*
Freezing point-solubility in water, **4**: 402
- Silver acetate*
Freezing point-solubility in water, **4**: 403; **7**: 323
- Silver bromate*
Freezing point-solubility in water, **4**: 318, 403; **7**: 322
- Silver nitrate*
Freezing point-solubility in water, **4**: 360
- Sodium acetate*
Boiling point elevation, **3**: 335
Density, aqueous solution, **3**: 102
Freezing point-solubility, **4**: 205
Freezing point-solubility in water, **4**: 403
- Sodium butyrate*
Density, aqueous solution, **3**: 102
- Sodium formate*
Density, aqueous solution, **3**: 102
- Sodium hydroxide*
Freezing point-solubility in water, **4**: 375, 393
- Sodium isobutyrate*
Density, aqueous solution, **3**: 102
- Strontium acetate*
Boiling point elevation, **3**: 335
- Strontium oxalate*
Solubility in water, **7**: 343
- Strontium tartrate*
Solubility in water, **7**: 343
- Suberic acid*
Freezing point-solubility in water, **4**: 402
- Succinic acid*
Freezing point-solubility in water, **4**: 402
- Sulfur dioxide*
Boiling point elevation, **3**: 328
- Sulfuric acid*
Boiling point, **3**: 316
Density, **3**: 135
Viscosity, **5**: 27
- Tartaric acid*
Freezing point-solubility in water, **4**: 402
- Tetraethylammonium bromide*
Boiling point elevation, **3**: 335
- Tetralin*
Distribution coefficients in water, **3**: 424
- Thallium monochloride*
Freezing point-solubility in water, **4**: 403; **7**: 319

Acetic acid.—(Continued)

- Thymol*
Freezing point-solubility, **4**: 173
 - Toluene*
Compressibility, **3**: 440
Density, **3**: 157
Distribution coefficients in water, **3**: 424
Heat of solution, **5**: 152, 156
Miscibility in water, **3**: 417
Refractive index, **7**: 80
Surface tension, **4**: 472
Vapor pressure, partial, **3**: 288
Viscosity of aqueous solution, **5**: 21
 - o-Toluidine*
Distribution coefficients in water, **3**: 430
Freezing point-solubility, **4**: 108
 - Toluidine (m-, p-)*
Freezing point-solubility, **4**: 108
 - Trichloroacetic acid*
Density, **3**: 153
Freezing point-solubility, **4**: 101
Viscosity, **5**: 35
 - Triethylamine*
Vapor pressure, **3**: 287
 - Triethylammonium bromide*
Boiling point elevation, **3**: 335
 - Triethylammonium iodide*
Boiling point elevation, **3**: 335
 - Trimethylamine*
Vapor pressure, **3**: 287
 - 2, 4, 6-Trimethylaniline*
Freezing point-solubility, **4**: 109
 - Trimethylcolchicine acid*
Boiling point elevation, **3**: 335
 - Trimethylsulfanilic acid*
Density, aqueous solution, **3**: 126
 - l-Turpentine*
Density, **3**: 157
 - Uranyl nitrate*
Density, aqueous solution, **3**: 102
 - Urea*
Density, aqueous solution, **3**: 125
 - Xylene*
Density, **3**: 157
 - o-Xylene*
Distribution coefficients in water, **3**: 424
 - m-Xylene*
Distribution coefficients in water, **3**: 424
 - p-Xylene*
Distribution coefficients in water, **3**: 424
Freezing point-solubility, **4**: 108
- Acetic anhydride**
Absorption spectra, **5**: 332, 337
Boiling point, **3**: 218, 340
Critical point data, **3**: 248
Density, aqueous solution, **3**: 114
Dielectric constant, **6**: 86
Electrical conductivity, **6**: 143
Heat of combustion, **5**: 166
Heat of vaporization, **5**: 137
Magnetic susceptibility, **6**: 361
Polarization of light scattered by, **5**: 266
Saponification constant, **7**: 136
Solubility in water, **3**: 387
Surface tension, **4**: 450
Vapor pressure, **3**: 218
Viscosity, liquid, **5**: 36; **7**: 215
- Acetamide**
 - Acetamide*-Acetic acid-Acetonitrile*
 - Acetic acid**
 - Acetic acid*-Acetylbenzoylimide-Benzamide*
 - Acetic acid*-Acetylbenzoylimide-Benzamide-Benzonitrile*
 - Benzamide*
Freezing point-solubility, **4**: 114

Acetic anhydride.—(Continued)

- Benzil*
Boiling point elevation, **3**: 340
 - Magnesium bromide*
Freezing point-solubility, **4**: 203
 - Paraldehyde*
Density, **3**: 165
Viscosity, **5**: 40
 - Phosgene*
Boiling point elevation, **3**: 330
 - Sodium oxide*
Freezing point-solubility in water, **4**: 414
 - Sulfur dioxide*
Boiling point elevation, **3**: 328
- Acetoacetic acid**
Decomposition, kinetics of, **7**: 122
- Acetoethyl-o-toluidine**
Viscosity, liquid, **7**: 221
- Nitrocellulose*
Density, **3**: 196
- α -Acetonaphthalide**
-*Ethyl alcohol*
Density, **3**: 161
Aqueous solution, **3**: 128
- Acetone**
Absorption spectra, **5**: 331, 336
Ultra-violet, **5**: 369, 371, 374, 376, 377
Adsorption by charcoal, **3**: 251
Azeotropic mixtures, **3**: 318–320, 323
Birefringence, **7**: 110
Boiling point, **3**: 218, 338
Aqueous solution, **3**: 310
Compressibility, **3**: 42
Condensation on ions and nuclei, **6**: 117
Critical point data, **3**: 239, 248
Density, **3**: 28, 33
Aqueous solution, **3**: 112, 113
Solid, **3**: 45
Dielectric constant, **6**: 82, 86, 105
Aqueous solution, **6**: 101
Diffusion in methyl alcohol, **5**: 72
Electrical conductivity, **6**: 143
Aqueous solution, **6**: 264
Flame propagation in, **2**: 184
Flash point, **2**: 161
Freezing point lowering of aqueous solution, **4**: 262
Heat of combustion, **5**: 167
Heat of fusion, **5**: 132
Heat of solution in water, **5**: 148, 157
Heat of vaporization, **5**: 137, 138
Heat of wetting by, **5**: 142
Ignition temperature, **2**: 174
Inflammability, limits of, **2**: 180
Ions, mobility of, in, **6**: 112
Magnetic susceptibility, **6**: 361
Aqueous solution, **6**: 364
Melting point, **3**: 45
Orthobaric density, **3**: 239
Photochemical hydrolysis, **7**: 163, 170
Polarization of light reflected from, **5**: 261
Polarization of light scattered by
Gas, **5**: 265
Liquid, **5**: 266
Refractive index
Aqueous solution, **7**: 68
Gas, **7**: 10
Liquid, **7**: 12, 35, 78
Solidification point, **1**: 61
Solubility of salts in, **4**: 208
Sound, velocity of, in
Gas, **6**: 463
Liquid, **6**: 464
Specific heat
Aqueous solution, **5**: 124
Gas, **5**: 81
Liquid, **5**: 108
Solid, **5**: 102
Surface tension, **4**: 450
Aqueous solution, **4**: 467

* Data for system will be found under this compound in Index. Full explanation on page vii.

Acetone.—(Continued)

- Thermal conductivity
 - Gas, **5**: 214, 215
 - Liquid, **5**: 227, 228
 - Pressure, effect of, **5**: 227
- Vapor pressure
 - Liquid, **3**: 218
 - Solid, **3**: 209
- Vapor pressure, partial, aqueous solution, **3**: 290
- Vapor pressure above 1 atm., **3**: 239
- Verdet constant, **6**: 426, 427
 - Dispersion, **6**: 433
- Aqueous solution, **6**: 427
- Viscosity
 - Aqueous solution, **5**: 22
 - Gas, **5**: 3
 - Liquid, **5**: 27; **7**: 214, 222
- X-rays, absorption coefficient, **6**: 13
- Acenaphthene*
- Acetamide*
- Acetanilide*
- Acetanilide*-Carbon disulfide
- Acetic acid*
- Air
 - Ions, mobility of, in, **6**: 112
- Ammonia-Methyl alcohol
 - Vapor pressure, **3**: 374
- Ammonium chloride
 - Density, aqueous solution, **3**: 101
 - Freezing point-solubility in water, **4**: 399
 - Miscibility in water, **3**: 409
- Ammonium chloride-Barium chloride
 - Freezing point-solubility in water, **4**: 425
- Ammonium perchlorate
 - Density, **3**: 136
- Ammonium sulfate
 - Freezing point-solubility in water, **4**: 400
- Ammonium thiocyanate
 - Boiling point elevation, **3**: 338
- Amyl acetate
 - Density, **3**: 163
 - Viscosity, **5**: 39
- Amyl alcohol
 - Compressibility, **3**: 440
 - Density, **3**: 162
 - Miscibility in water, **3**: 414
- Anethole
 - Miscibility in water, **3**: 413
- Aniline
 - Density, **3**: 163
 - Heat of solution, **5**: 153
 - Miscibility in water, **3**: 414
 - Vapor pressure, **3**: 288
 - Viscosity, **5**: 39
- Anisole
 - Vapor pressure, **3**: 288
- Anthracene
 - Freezing point-solubility, **4**: 174
- Anthraquinone
 - Freezing point-solubility, **4**: 174
- Antimony trichloride
 - Density, **3**: 136
 - Viscosity, **5**: 27
- Azobenzene
 - Boiling point elevation, **3**: 339
 - Heat of solution, **5**: 153
- Barium chloride
 - Freezing point-solubility in water, **4**: 411
- Barium hydroxide
 - Density, aqueous solution, **3**: 102
- Barium perchlorate
 - Density, **3**: 140
- Benzamide
 - Boiling point elevation, **3**: 339
- Benzanilide
 - Boiling point elevation, **3**: 339

Acetone.—(Continued)

- Benzene
 - Density, **3**: 163
 - Dielectric constant, **6**: 102
 - Distribution coefficients in water, **3**: 425
 - Heat of formation, **5**: 153
 - Miscibility in water, **3**: 414
 - Refractive index, **7**: 82
 - Specific heat, **5**: 127
 - Surface tension, **4**: 472
 - Viscosity, **5**: 39
- Benzene-Benzophenone
 - Density, **3**: 197
- Benzene-Chloroform
 - Surface tension, **4**: 474
- Benzene-Ethyl ether
 - Density, **3**: 197
 - Viscosity, **5**: 51
- Benzene-Toluene
 - Surface tension, **4**: 474
- Benzil
 - Boiling point elevation, **3**: 339
- Benzoic acid
 - Boiling point elevation, **3**: 338
 - Freezing point-solubility, **4**: 111
 - Heat of solution, **5**: 153
- Benzophenone
 - Density, **3**: 164
 - Miscibility in water, **3**: 413
- Benzophenone-Ethyl alcohol
 - Density, **3**: 197
- Benzoylcinchonine
 - Density, **3**: 164; **7**: 82
- Benzoylcinchotoxine
 - Density, **7**: 82
 - Refractive index, **7**: 82
- Bismuth chloride
 - Density, **3**: 137
- Bismuth nitrate-Nitric acid
 - Freezing point-solubility in water, **4**: 424
- Borneol
 - Density, **7**: 82
 - Refractive index, **7**: 82
- Bornylene nitrosite
 - Boiling point elevation, **3**: 339
- Bromine
 - Freezing point-solubility, **4**: 32
- Bromobenzene
 - Density, **3**: 162
 - Aqueous solution, **3**: 129
 - Miscibility in water, **3**: 411
 - Viscosity, **5**: 39
- Bromocamphor
 - Density, **3**: 163; **7**: 82
 - Refractive index, **7**: 82
- Bromoform
 - Density, **3**: 146
 - Vapor pressure, **3**: 286
 - Viscosity, **5**: 32
- Butyl alcohol
 - Density, aqueous solution, **3**: 128
- Butyramide
 - Boiling point elevation, **3**: 338
- Butyric acid
 - Vapor pressure, **3**: 288
- Cadmium bromide
 - Density, **3**: 139
- Cadmium iodide
 - Boiling point elevation, **3**: 339
 - Density, **3**: 139
- Caffeine
 - Density, **3**: 163
- Calcium chloride
 - Freezing point-solubility in water, **4**: 411
- Calcium nitrate
 - Density, **3**: 140
 - Viscosity, aqueous solution, **5**: 24

Acetone.—(Continued)

- Calcium nitrate-Ethyl alcohol
 - Density, **3**: 143
- Calcium nitrate-Methyl alcohol
 - Density, **3**: 143
 - Viscosity, **5**: 30
- Camphor
 - Boiling point elevation, **3**: 339
 - Density, **3**: 163; **7**: 82
 - Freezing point-solubility, **4**: 111
 - Refractive index, **7**: 82
- Carbazole
 - Freezing point-solubility, **4**: 174
- Carbon disulfide
 - Compressibility, **3**: 440
 - Density, **3**: 145
 - Freezing mixture, use as, **1**: 65
 - Heat of solution, **5**: 151, 158
 - Refractive index, **7**: 78
 - Dispersion, **7**: 102
 - Solubility, mutual, **3**: 397
 - Surface tension, **4**: 471
 - Vapor pressure, **3**: 286, 375
 - Viscosity, **5**: 32
- Carbon disulfide-Picric acid
 - Vapor pressure, **3**: 375
- Carbon tetrachloride
 - Density, **3**: 143
 - Distribution coefficients in water, **3**: 425
 - Heat of solution, **5**: 151
 - Viscosity, **5**: 32
- Catechol
 - Freezing point-solubility, **4**: 111
- Cellulose acetate
 - Density, aqueous solution, **3**: 129
- Cesium chloride
 - Viscosity, aqueous solution, **5**: 24
- Cesium chloride-Mercuric chloride
 - Solubility relations, **4**: 211
- Cesium nitrate
 - Viscosity, aqueous solution, **5**: 24
- Cesium perchlorate
 - Density, **3**: 142
- Chloral alcoholate
 - Boiling point elevation, **3**: 338
- Chloral hydrate
 - Boiling point elevation, **3**: 338
 - Heat of solution, **5**: 152
- Chlorine
 - Freezing point lowering, **4**: 36
 - Freezing point-solubility, **4**: 31
- Chloroacetamide
 - Boiling point elevation, **3**: 338
- Chloroacetic acid
 - Boiling point elevation, **3**: 338
- Chlorobenzene
 - Density, **3**: 162
 - Surface tension, **4**: 472
 - Viscosity, **5**: 39
- Chloroform
 - Boiling point, **3**: 312
 - Compressibility, **3**: 440
 - Density, **3**: 146; **7**: 78
 - Aqueous solution, **3**: 125
 - Distribution coefficients in water, **3**: 425
 - Heat of solution, **5**: 151, 155, 158
 - Magnetic rotatory power, **6**: 432
 - Miscibility in water, **3**: 410
 - Refractive index, **7**: 78
 - Dispersion, **7**: 103
 - Specific heat, **5**: 126
 - Surface tension, **4**: 471
 - Vapor pressure, partial, **3**: 286
 - Viscosity, **5**: 32
- o-Chlorophenol
 - Density, **3**: 162
 - Freezing point-solubility, **4**: 111
 - Heat of solution, **5**: 158
 - Specific heat, **5**: 127
 - Viscosity, **5**: 39

* Data for system will be found under this compound in Index. Full explanation on page vii.

Acetone.—(Continued)

- 1-Chlorotetrahydronaphthalene
Vapor pressure, **3**: 288
- Chromic chloride
Boiling point elevation, **3**: 339
- Cinchonine
Density, **3**: 164
- Cinchotoxine
Density, **7**: 82
Refractive index, **7**: 82
- Citric acid
Heat of solution, **5**: 153
- Cobaltous chloride
Density, **3**: 139
Magnetic susceptibility, **6**: 364
- Cobaltous nitrate
Magnetic susceptibility, **6**: 364
- Cresol
Vapor pressure, partial, **3**: 288
- Cupric chloride
Boiling point elevation, **3**: 339
Density, **3**: 139
Freezing point-solubility in water, **4**: 411
- Cupric chloride-Potassium chloride
Solubility relations, **4**: 211
- Cupric chloride-Sodium chloride
Freezing point-solubility in water **4**: 427
- Cupric nitrate-Ethyl alcohol
Viscosity, **5**: 30
- Cyclohexane
Viscosity, **5**: 39
- Cyclohexanone
Vapor pressure, **3**: 288
- 1, 2-Dibromopropionic acid
Boiling point elevation, **3**: 338
- Dichloroacetamide
Boiling point elevation, **3**: 338
- Diethyl malate
Boiling point elevation, **3**: 339
- Diethyl tartrate
Boiling point elevation, **3**: 339
Density, **3**: 163
- Diisomyl
Solubility, mutual, **3**: 397
- o-Dimethoxybenzene
Viscosity, **5**: 39
- Dimethyl acetylmaleate
Boiling point elevation, **3**: 339
- Dimethyl malate
Boiling point elevation, **3**: 338
- Dimethyl tartrate
Boiling point elevation, **3**: 338
- Dimethylaniline
Vapor pressure, **3**: 288
- Diphenyl
Boiling point elevation, **3**: 339
Heat of solution, **5**: 153
- Diphenylamine
Boiling point elevation, **3**: 339
Heat of solution, **5**: 153
- Diphenylurea
Boiling point elevation, **3**: 339
- Erucic acid
Heat of solution, **5**: 153
- Ethyl acetate
Heat of solution, **5**: 153, 156
Miscibility in water, **3**: 414
- Ethyl alcohol
Boiling point, **3**: 313
Density, **3**: 158
Heat of solution, **5**: 152, 156
Magnetic susceptibility, **6**: 364
Surface tension, **4**: 472
Viscosity, **5**: 30, 37
- Ethyl alcohol-Lithium bromide
Viscosity, **5**: 31
- Ethyl alcohol-Potassium thiocyanate
Viscosity, **5**: 31
- Ethyl alcohol-Silver nitrate
Solubility relations, **4**: 211

Acetone.—(Continued)

- Ethyl bromide
Density, **7**: 81
Refractive index, **7**: 81
Dispersion, **7**: 103
- Ethyl chloroacetate
Density, **3**: 162
- Ethyl di-p-toluyglycerate
Density, **3**: 164
- Ethyl ether
Boiling point, **3**: 313
Density, **3**: 162
Heat of solution, **5**: 156
Specific heat, **5**: 127
Vapor pressure, **3**: 288
Viscosity, **5**: 39
- Ethylacetanilide
Boiling point elevation, **3**: 339
- Ethylene chloride
Density, **7**: 80
Refractive index, **7**: 80
Dispersion, **7**: 103
- Ferric chloride
Boiling point elevation, **3**: 339
Density, **3**: 139
Magnetic susceptibility, **6**: 364
- Fluorene
Freezing point-solubility, **4**: 174
- Formanilide
Boiling point elevation, **3**: 339
- Fumaric acid
Freezing point-solubility, **4**: 111
- Gallic acid
Density, **3**: 163
- Glycerol
Solubility, mutual, **3**: 395
- Glycolamide
Boiling point elevation, **3**: 338
- Glycolanilide
Boiling point elevation, **3**: 339
- Guaiacol
Viscosity, **5**: 39
- Heptane
Heat of solution, **5**: 153
- Hexahydrophenol
Vapor pressure, **3**: 288
- Hexane
Density, **3**: 163
Viscosity, **5**: 39
- Hydrogen bromide
Boiling point elevation, **3**: 328
Freezing point-solubility, **4**: 186
- Hydroquinol
Freezing point-solubility, **4**: 111
- Iodine
Boiling point elevation, **3**: 338
Freezing point-solubility, **4**: 33
Reaction kinetics, **7**: 146
- Isobutyl ricinoleate
Boiling point elevation, **3**: 339
- Isobutylacetamide
Boiling point elevation, **3**: 338
- Isobutyramide
Boiling point elevation, **3**: 338
- Isopropyl alcohol
Heat of solution, **5**: 153
Refractive index, **7**: 82
Dispersion, **7**: 104
Vapor pressure, **3**: 288
Viscosity, **5**: 39
- Lactamide
Boiling point elevation, **3**: 338
- Lactanilide
Boiling point elevation, **3**: 339
- Lithium bromide
Viscosity, aqueous solution, **5**: 24
- Lithium bromide-Methyl alcohol
Viscosity, **5**: 31
- Lithium chloride
Boiling point elevation, **3**: 339
- Lithium nitrate
Boiling point elevation, **3**: 339

Acetone.—(Continued)

- Lithium perchlorate
Density, **3**: 141
- Lithium sulfate
Freezing point-solubility in water, **4**: 411
Miscibility in water, **3**: 409
- Magnesium bromide
Freezing point-solubility, **4**: 203
- Magnesium iodide
Freezing point-solubility, **4**: 204
- Magnesium perchlorate
Density, **3**: 140
- Maleic acid
Freezing point-solubility, **4**: 111
- Malic acid
Density, **3**: 162
- Mandelic acid
Boiling point elevation, **3**: 339
- Mannitoboric acid
Boiling point elevation, **3**: 339
- Mercuric chloride
Boiling point elevation, **3**: 339
Density, **3**: 139
Freezing point-solubility, **4**: 212
Verdet constant, **6**: 427
- Mercuric chloride-Potassium chloride
Solubility relations, **4**: 211
- Mercuric iodide-Potassium iodide
Solubility relations, **4**: 211
- Methyl alcohol
Boiling point, **3**: 312
Density, **3**: 150
Heat of solution, **5**: 151, 155
Surface tension, **4**: 471
Viscosity, **5**: 30, 34
- Methyl alcohol-Potassium fluoride
Freezing point-solubility in water, **4**: 426
- Methyl alcohol-Potassium thiocyanate
Viscosity, **5**: 31
- Methyl cyanoacetate
Density, **3**: 162
- Methyl di-p-toluyglycerate
Density, **3**: 164
- Methyl ethyl ketone
Density, **3**: 162
Vapor pressure, **3**: 288
- Methyl iodide
Density, **3**: 149
- Methylacetanilide
Boiling point elevation, **3**: 339
Density, **3**: 163
- Methylene chloride
Density, **3**: 148
Viscosity, **5**: 33
- Naphthalene
Boiling point elevation, **3**: 339
Density, **3**: 163; **7**: 82
Freezing point-solubility, **4**: 174
Heat of solution, **5**: 153
Miscibility in water, **3**: 413
Refractive index, **7**: 82
- β-Naphthol
Viscosity, **5**: 39
- Naphthylamine (α-, β-)
Heat of solution, **5**: 153
- Nicotine
Density, **3**: 163
- Nitroaniline (o-, p-)
Density, **7**: 82
Refractive index, **7**: 82
- Nitrobenzene
Birefringence, magnetic, **7**: 112
Density, **3**: 163
Vapor pressure, **3**: 288
Viscosity, **5**: 39
- Nitrocellulose
Density, **3**: 196
Osmotic pressure, **4**: 431
- Nitroglycerol
Vapor pressure lowering, **3**: 300

Acetone.—(Continued)

- 1-Nitronaphthalene
 - Boiling point elevation, **3**: 339
 - Heat of solution, **5**: 153
- Nitrophenol (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 111
- p*-Nitrotoluene
 - Density, **3**: 163
- Oleic acid
 - Density, **3**: 164
 - Vapor pressure lowering, **3**: 300
- Palmitic acid
 - Density, **3**: 164
- Pentachloroethane
 - Density, **3**: 153
 - Distribution coefficients in water, **3**: 425
 - Vapor pressure, **3**: 287
 - Viscosity, **5**: 35
- Phenanthrene
 - Freezing point-solubility, **4**: 174
- Phenol
 - Density, **3**: 163
 - Freezing point-solubility, **4**: 111
 - Heat of solution, **5**: 153
 - Miscibility in water, **3**: 414
 - Surface tension, **4**: 472
 - Vapor pressure of aqueous solution, **3**: 378, 384
 - Viscosity, **5**: 39
- Phenyl ether
 - Density, **3**: 163
 - Viscosity, **5**: 39
- Phenylacetamide
 - Boiling point elevation, **3**: 339
- Phenylurea
 - Boiling point elevation, **3**: 339
- Phenylurethan
 - Boiling point elevation, **3**: 339
- Picryl chloride
 - Boiling point elevation, **3**: 338
- Picryl cinchonidine
 - Density, **3**: 164
- Potassium bromide
 - Density, aqueous solution, **3**: 103
- Potassium carbonate
 - Freezing point-solubility in water, **4**: 412
- Potassium chloride
 - Density, aqueous solution, **3**: 103
 - Miscibility in water, **3**: 409
- Potassium fluoride
 - Freezing point-solubility in water, **4**: 412
- Potassium iodide
 - Density, **3**: 142
 - Aqueous solution, **3**: 103
- Potassium perchlorate
 - Density, **3**: 142
- Potassium picrate
 - Freezing point-solubility in water, **4**: 412
- Potassium sulfate
 - Freezing point-solubility in water, **4**: 412
- Potassium thiocyanate
 - Viscosity, aqueous solution, **5**: 24
- Propionamide
 - Boiling point elevation, **3**: 338
 - Density, **3**: 162
- Propyl acetate
 - Surface tension, **4**: 472
- Pyridine acetate
 - Heat of solution, **5**: 153
- Pyrocatechol
 - Viscosity, **5**: 39
- Pyrogallol
 - Freezing point-solubility, **4**: 111
 - Heat of solution, **5**: 153
- Resodiacetophenone
 - Boiling point elevation, **3**: 339
- Resorcinol
 - Boiling point elevation, **3**: 338
 - Freezing point-solubility, **4**: 111

-Resorcinol.—(Continued)

- Heat of solution, **5**: 153
- Viscosity, **5**: 39
- Rubidium bromide
 - Viscosity, aqueous solution, **5**: 24
- Rubidium chloride
 - Viscosity, aqueous solution, **5**: 24
- Rubidium iodide
 - Viscosity, aqueous solution, **5**: 24
- Rubidium nitrate
 - Viscosity, aqueous solution, **5**: 24
- Rubidium perchlorate
 - Density, **3**: 142
- Salicylaldehyde
 - Vapor pressure, **3**: 288
 - Viscosity, **5**: 39
- Salicylamide
 - Boiling point elevation, **3**: 339
- Salicylic acid
 - Boiling point elevation, **3**: 339
 - Freezing point-solubility, **4**: 111
 - Heat of solution, **5**: 153
- Salt solutions
 - Miscibility of, **3**: 410
- Silver nitrate
 - Density, **3**: 139
- Sodium chloride
 - Freezing point-solubility in water, **4**: 411
- Sodium dinitrophenate
 - Freezing point-solubility in water, **4**: 412
- Sodium iodide
 - Boiling point elevation, **3**: 339
 - Density, **3**: 141
 - Freezing point-solubility, **4**: 205
 - Freezing point-solubility in water, **4**: 411
- Sodium nitrate
 - Freezing point-solubility in water, **4**: 412
- Sodium perchlorate
 - Density, **3**: 141
- Sodium sulfate
 - Freezing point-solubility in water, **4**: 411
- Stannous chloride
 - Density, **3**: 137
- Stearic acid
 - Density, **3**: 164
- Strontium perchlorate
 - Density, **3**: 140
- Succinic acid
 - Density, **3**: 162
- Sucrose
 - Freezing point-solubility in water, **4**: 411
- Sulfur
 - Density, **3**: 132
 - Aqueous solution, **3**: 101
 - Freezing point-solubility, **4**: 35
- Sulfur dioxide
 - Density, **3**: 135
 - Viscosity, **5**: 27
- Tetraammonium iodide
 - Boiling point elevation, **3**: 339
- 1, 1, 2, 2-Tetrabromoethane
 - Boiling point elevation, **3**: 338
- Tetrabromophenolphthalein
 - Boiling point elevation, **3**: 339
- Tetrachloroethane
 - Density, **3**: 153
 - Distribution coefficients in water, **3**: 425
 - Viscosity, **5**: 36
- Tetrachloroethylene
 - Distribution coefficients in water, **3**: 425
- Tetraethylammonium iodide
 - Density, **3**: 163
- Tetrahydronaphthalene
 - Vapor pressure, **3**: 288
 - Viscosity, **5**: 39

Acetone.—(Continued)

- ar*-Tetrahydro- β -naphthol
 - Vapor pressure, **3**: 288
 - Viscosity, **5**: 39
 - Tetrapropylammonium iodide
 - Boiling point elevation, **3**: 339
 - Density, **3**: 164
 - Tetrapropylammonium nitrate
 - Boiling point elevation, **3**: 339
 - Thymol
 - Density, **3**: 163
 - Toluene
 - Boiling point, **3**: 313
 - Density, **3**: 163
 - Dielectric constant, **6**: 102
 - Distribution coefficients in water, **3**: 425
 - Solubility in water, **3**: 406
 - Vapor pressure, **3**: 288
 - p*-Toluenesulfonylcinchonidine
 - Density, **3**: 164
 - Triamylammonium bromide
 - Boiling point elevation, **3**: 339
 - Triamylammonium chloride
 - Boiling point elevation, **3**: 339
 - Triamylammonium thiocyanate
 - Boiling point elevation, **3**: 339
 - Trichloroacetamide
 - Boiling point elevation, **3**: 338
 - Trichloroacetic acid
 - Density, **3**: 153
 - Viscosity, **5**: 35
 - Trichloroethylene
 - Distribution coefficients in water, **3**: 425
 - Trichlorolactamide
 - Boiling point elevation, **3**: 338
 - Triethylsulfonium iodide
 - Boiling point elevation, **3**: 338
 - Trimethylcolchicine
 - Boiling point elevation, **3**: 339
 - Trinitroglycerol
 - Vapor pressure, partial, **3**: 288
 - Tripalmitin
 - Boiling point elevation, **3**: 339
 - Tripropylammonium bromide
 - Boiling point elevation, **3**: 339
 - Tripropylammonium chloride
 - Boiling point elevation, **3**: 339
 - Tristearin
 - Boiling point elevation, **3**: 339
 - Urea
 - Boiling point elevation, **3**: 338
 - Urethan
 - Boiling point elevation, **3**: 338
 - Heat of solution, **5**: 153
 - Valeramide
 - Boiling point elevation, **3**: 338
 - Zinc chloride
 - Density, **3**: 138
- Acetonitrile**
- Absorption spectra, **5**: 331, 335
 - Azeotropic mixtures, **3**: 319
 - Boiling point, **3**: 216, 334
 - Critical point data, **3**: 238, 248
 - Density, **3**: 28, 33
 - Aqueous solution, **3**: 112, 113
 - Dielectric constant, **6**: 82, 84
 - Diffusion in methyl alcohol, **5**: 72
 - Diffusion in water, **5**: 69
 - Electrical conductivity, **6**: 143
 - Aqueous solution, **6**: 262
 - Heat of combustion, **5**: 167
 - Heat of vaporization, **5**: 136
 - Hydrolysis of, **7**: 141
 - Orthobaric density, **3**: 237
 - Refractive index
 - Gas, **7**: 10
 - Liquid, **7**: 34
 - Solubility of salts in, **4**: 207
 - Specific heat, **5**: 107
 - Surface tension, **4**: 448
 - Viscosity, liquid, **7**: 213

Acetonitrile.—(Continued)

- Acetamide*
 - Acetamide*-Acetic acid-Acetic anhydride
- Anthracene
 - Boiling point elevation, **3**: 334
- Benzonitrile
 - Boiling point elevation, **3**: 334
- Benzyl cyanide
 - Boiling point elevation, **3**: 334
- Bromodinitromesitylene
 - Boiling point elevation, **3**: 334
- Cadmium iodide
 - Density, **3**: 139
- Dibenzyl
 - Boiling point elevation, **3**: 334
- Diethylammonium chloride
 - Boiling point elevation, **3**: 334
- Dimethyl tartrate
 - Boiling point elevation, **3**: 334
- Dimethylpyrone
 - Boiling point elevation, **3**: 334
- Dinitromesitylene
 - Boiling point elevation, **3**: 334
- Diphenyl
 - Boiling point elevation, **3**: 334
- Diphenylamine
 - Boiling point elevation, **3**: 334
- Ethyl alcohol
 - Density, **3**: 154
 - Vapor pressure, **3**: 287
- Isobutylammonium chloride
 - Boiling point elevation, **3**: 334
- Lactonitrile
 - Density, **3**: 154
- Magnesium iodide
 - Freezing point-solubility, **4**: 203
- Mercuric chloride
 - Density, **3**: 139
- Mercuric iodide
 - Density, **3**: 139
- Methyl alcohol
 - Density, **3**: 150
- Methyl cyanoacetate
 - Boiling point elevation, **3**: 334
- Naphthalene
 - Boiling point elevation, **3**: 334
- Picric acid
 - Boiling point elevation, **3**: 334
- Picryl chloride
 - Boiling point elevation, **3**: 334
- Potassium iodide
 - Density, **3**: 142
- Pyridine
 - Viscosity, **5**: 30, 36
- Pyridine-Silver nitrate
 - Density, **3**: 143
 - Viscosity, **5**: 30
- Silver nitrate
 - Boiling point elevation, **3**: 334
 - Density, **3**: 139
 - Viscosity, **5**: 28
- Tetraethylammonium iodide
 - Boiling point elevation, **3**: 334
 - Density, **3**: 154
- Tetrapropylammonium iodide
 - Boiling point elevation, **3**: 334
 - Density, **3**: 154
- Tetrapropylammonium nitrate
 - Boiling point elevation, **3**: 334
- 1, 3, 5-Trichlorobenzene
 - Boiling point elevation, **3**: 334
- 2, 4, 6-Trinitrotoluene
 - Boiling point elevation, **3**: 334
- Trinitro-*p*-xylene
 - Boiling point elevation, **3**: 334
- Triphenylcarbinol
 - Boiling point elevation, **3**: 334
- Triphenylmethane
 - Boiling point elevation, **3**: 334

Acetonylacetone

- Absorption spectra, ultra-violet, **5**: 340, 376, 377
 - Refractive index, **7**: 39
- Acetophenone**
- Absorption spectra, **5**: 332, 343
 - Azeotropic mixtures, **3**: 323
 - Birefringence, **7**: 111
 - Boiling point, **3**: 224
 - Cryoscopic constant, **4**: 183
 - Density, **3**: 29, 34
 - Dielectric constant, **6**: 93
 - Electrical conductivity, **6**: 144
 - Heat of combustion, **5**: 167
 - Heat of vaporization, **5**: 137
 - Magnetic susceptibility, **6**: 362
 - Melting point, **4**: 6
 - Melting point under pressure, **4**: 10
 - Melting pressure, **4**: 16
 - Refractive index, **7**: 43
 - Specific heat, **5**: 111
 - Surface tension, **4**: 457
 - Vapor pressure, **3**: 224
 - Verdet constant, **6**: 429
 - Viscosity, liquid, **5**: 28, 33, 46; **7**: 219
 - Acetic acid*
 - Antimony tribromide
 - Density, **3**: 137
 - Freezing point-solubility, **4**: 196
 - Viscosity, **5**: 28
 - Antimony trichloride
 - Freezing point-solubility, **4**: 192
 - Benzene
 - Boiling point elevation, **3**: 344
 - Density, **3**: 179
 - Freezing point-solubility, **4**: 134
 - Viscosity, **5**: 46
 - Benzoic acid
 - Freezing point-solubility, **4**: 179
 - Catechol
 - Freezing point-solubility, **4**: 137
 - Chloroacetic acid
 - Freezing point-solubility, **4**: 106
 - Chloroform
 - Density, **3**: 147
 - Viscosity, **5**: 33
 - Cyclohexane
 - Boiling point elevation, **3**: 345
 - 2, 4-Dinitrophenol
 - Freezing point-solubility, **4**: 126
 - Ethylene chloride
 - Density, **3**: 155
 - Viscosity, **5**: 36
 - Glycerol
 - Solubility, mutual, **3**: 396
 - Hydrogen peroxide
 - Distribution coefficients in water, **3**: 419
 - Hydroquinol
 - Freezing point-solubility, **4**: 140
 - Isoamyl acetate
 - Density, **3**: 189
 - Viscosity, **5**: 50
 - Lithium bromide
 - Density, **3**: 141
 - Lithium chloride
 - Density, **3**: 141
 - Naphthalene
 - Density, **7**: 86
 - Refractive index, **7**: 86
 - Dispersion, **7**: 105
 - Naphthol (α -, β -)
 - Freezing point-solubility, **4**: 153
 - α -Naphthylamine
 - Density, **7**: 86
 - Refractive index, **7**: 86
 - Dispersion, **7**: 105
 - Nitrogen tetroxide
 - Boiling point elevation, **3**: 329
 - Nitrophenol (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 129-131

Acetophenone.—(Continued)

- Pentachloroethane
 - Density, **3**: 153
 - Viscosity, **5**: 35
 - Phenol
 - Freezing point-solubility, **4**: 136
 - Picric acid
 - Freezing point-solubility, **4**: 120
 - Potassium iodide
 - Density, **3**: 142
 - Pyrogallol
 - Freezing point-solubility, **4**: 141
 - Quinoline
 - Density, **7**: 86
 - Refractive index, **7**: 86
 - Dispersion, **7**: 105
 - Resorcinol
 - Freezing point-solubility, **4**: 139
 - Sodium iodide
 - Density, **3**: 141
 - Sulfuric acid
 - Freezing point-solubility, **4**: 188
 - Tetrachloroethane
 - Density, **3**: 154
 - Viscosity, **5**: 36
 - Tetrachloroethylene
 - Density, **3**: 152
 - Tetraethylammonium iodide
 - Density, **3**: 190
 - Trichloroacetic acid
 - Density, **3**: 153
 - Freezing point-solubility, **4**: 103
 - Viscosity, **5**: 35
- Acetophenonoxime**
- Absorption spectra, **5**: 343
 - Electrical conductivity, aqueous solution, **6**: 286
 - Intramolecular transformation, **7**: 116
- Benzene**
- Boiling point elevation, **3**: 344
- Ethyl alcohol**
- Boiling point elevation, **3**: 337
- Ethyl ether**
- Boiling point elevation, **3**: 341
- o*-Acetotoluide**
- Crystallography, **1**: 329
 - Diffusion in methyl alcohol, **5**: 73
- p*-Acetotoluide**
- Freezing point-solubility, **4**: 154
- Benzene**
- Distribution coefficients in water, **3**: 431
- Chloroform**
- Boiling point elevation, **3**: 332
- p*-Acetotoluide**
- Crystallography, **1**: 329
 - Surface tension, aqueous solution, **4**: 470
- o*-Acetotoluide***
- Ethyl alcohol
 - Density, **3**: 161
 - Aqueous solution, **3**: 128

Acetoxime

- Absorption spectra, ultra-violet, **5**: 364
 - Cryoscopic constant, **4**: 183
 - Electrical conductivity, aqueous solution, **6**: 264
 - Freezing point lowering of aqueous solution, **4**: 262
 - Surface tension, **4**: 450
- p*-Acetoxyacetanilide**
- Chloroform
 - Distribution coefficients in water, **3**: 432

Acetyl bromide

- Azeotropic mixtures, **3**: 319
- Dielectric constant, **6**: 84
- Electrical conductivity, **6**: 143

Acetyl chloride

- Absorption spectra, **5**: 335
- Boiling point, **3**: 216
- Dielectric constant, **6**: 82, 84

* Data for system will be found under this compound in Index. Full explanation on page vii.

Acetyl choride.—(Continued)

Electrical conductivity, **6**: 143
Heat of vaporization, **5**: 136
Refractive index, **7**: 34
Specific heat, **5**: 107
Surface tension, **4**: 448
Verdet constant, **6**: 428

Acetyl fluoride

Solubility in non-aqueous liquids, **3**: 269

Acetyl value, definition, **2**: xii**Acetylacetone**

Absorption spectra, **5**: 332, 337, 371, 377
Birefringence, magnetic, **7**, 111
Density, **3**: 29
Dielectric constant, **6**: 88
Electrical conductivity, **6**: 144
Aqueous solution, **6**: 269
Heat of solution in water, **5**: 149
Magnetic susceptibility, **6**: 362
Refractive index, **7**: 37
Solubility in water, **3**: 388
Surface tension, **4**: 452
-Tetraethylammonium iodide
Density, **3**: 172
-Water
Critical solution isotherms, **3**: 365

 α -N-Acetylbenzoylhydroxylamine

- β -N-Acetylbenzoylhydroxylamine

Freezing point-solubility, **4**: 153

Acetylbenzoylimide

-Acetic acid *-Acetic anhydride-Benzamide
-Acetic acid *-Acetic anhydride-Benzamide-Benzonitrile

2, 4-Acetylchlorotoluidine

-Ethyl alcohol

Freezing point-solubility in water, **4**: 405

2, 5-Acetylchlorotoluidine

-Ethyl alcohol

Freezing point-solubility in water, **4**: 405

Acetylcoumaric acid

Heat of combustion, **5**: 166

Acetyldiphenylamine

Diffusion in benzene, **5**: 74

Diffusion in methyl alcohol, **5**: 73

-Diphenylamine

Freezing point-solubility, **4**: 161

Acetylene

Absorption spectra, **5**: 331, 335

Boiling point, **3**: 230

Compressibility, **3**: 14

Critical point data, **3**: 230, 248

Critical potentials, **6**: 72

Decomposition pressure of hydrate, **7**: 245

Density, gas, **3**: 3

Detonation, **2**: 185

Reflected waves in, **2**: 186

Detonation wave velocity, **2**: 186

Dielectric constant, **6**: 82

Electrons, attachment of, to form ions, **6**: 117

Explosion in closed vessels, **2**: 191

Explosive mixtures, limiting dilutions, **2**: 186

Flame propagation in, **2**: 184

Free energy of solution, **7**: 245

Heat of combustion, **5**: 163

Heat of decomposition of hydrate, **7**: 245

Heat of formation, **5**: 181

Ignition temperature, **2**: 173

Inflammability, limits of, **2**: 178

Ionization by α -particles, **6**: 122

Ionization by γ -rays, **6**: 123

Ions, mobility of, in, **6**: 111

Orthobaric density, **3**: 230

Refractivity, **7**: 10

Solubility in aqueous solutions, **3**: 280

Solubility in non-aqueous liquids, **3**: 269

Solubility in water, **3**: 260

Sound, velocity of, in, **6**: 463

Acetylene.—(Continued)

Specific heat, gas, **5**: 80

Sublimation point, **3**: 230

Surface tension, **4**: 441

Thermal conductivity, **5**: 214

Thermal expansion, **3**: 16

Triple point, **3**: 230

Vapor pressure, **3**: 208

Vapor pressure above 1 atm., **3**: 230

Viscosity, gas, **5**: 3

-Carbon dioxide

Vapor pressure, **3**: 358

-Ethane

Vapor pressure, **3**: 360, 382

-Hydrogen

Ions, mobility of, in, **6**: 113

-Hydrogen bromide

Freezing point-solubility, **4**: 186

-Methyl ether

Freezing point-solubility, **4**: 105

Acetylene black, rubber, effect on, **2**: 287

1, 2-Acetylene dibromide

Refractive index, **7**: 34

Viscosity, liquid, **7**: 213

1, 2-Acetylene dichloride

Azeotropic mixtures, **3**: 319, 323

Birefringence, electric, **7**: 110

Viscosity, liquid, **7**: 213

-Iodine

Freezing point-solubility, **4**: 33

-Sulfur

Freezing point-solubility, **4**: 35

Acetylene difluoride

Solubility in water, **3**: 261

cis-Acetylene diiodide

-trans-Acetylene diiodide

Freezing point-solubility, **4**: 105

Acetylene flame

Emission, spectral, **5**: 245

Acetylene lamp, temperature, **5**: 247

Acetylene tetrabromide. *See* Tetrabromoethane.

Acetylenedicarboxylic acid

Electrical conductivity, aqueous solution, **6**: 265

Heat of combustion, **5**: 165

-Methyl alcohol

Density, **3**: 151

Viscosity, **5**: 34

Acetylenethyaminonaphthalene (α -, β -)

-Quinoline

Density, **7**: 88

Refractive index, **7**: 88

Dispersion, **7**: 107

Acetylglycine

Absorption spectra, ultra-violet, **5**: 366

2-Acetylmethylindazole

Refractive index, **7**: 45

-Quinoline

Density, **7**: 87

Refractive index, **7**: 87

Dispersion, **7**: 106

Acetylmalic acid

Electrical conductivity, aqueous solution, **6**: 275

Optical rotatory power, **7**: 370

Acetylmethyl hexyl ketone

Dielectric constant, **6**: 95

Electrical conductivity, **6**: 144

Acetylphenylacetylene

Magnetic susceptibility, **6**: 363

Verdet constant, **6**: 430

N-Acetylphenylenediamine (*o*-, *m*-, *p*-)

Solubility in water, **4**: 253

Acetylphenylhydrazine

Diffusion in methyl alcohol, **5**: 73

Acetylsalicylic acid

Crystallography, **1**: 328

Electrical conductivity, aqueous solution, **6**: 290

Solubility in water, **3**: 392

Acetylsalicylic acid.—(Continued)

-Ethyl ether

Distribution coefficients in water, **3**: 431

-Xylene

Distribution coefficients in water, **3**: 431

Acetyltribromophenol

-Tribromophenol

Freezing point-solubility, **4**: 118

Acetylurea

Heat of solution in water, **5**: 148

Acid anhydrides

Saponification constants, **7**: 136

Acid value, definition, **2**: xii

Acids

Aliphatic

Salts, X-ray diffraction data, **1**: 345, 348

X-ray diffraction data, **1**: 347

Commercial, vapor pressure, **3**: 301

Esterification constants, **7**: 138

Acieral (alloy), **2**: 370; *cf.* 534

Acme nickel steel, **2**: 370

Acmite, refractive index, **7**: 26

Aconine, optical rotatory power, **7**: 477

Aconitic acid

Absorption spectra, ultra-violet, **5**: 375

Electrical conductivity, aqueous solution, **6**: 273

Heat of combustion, **5**: 165

Heat of solution in water, **5**: 149

Aconitine

Absorption spectra, **5**: 356

Crystallography, **1**: 337

Diffusion in ethyl alcohol, **5**: 74

Optical rotatory power, **7**: 478

-Ethyl alcohol

Viscosity, **5**: 39

Acridine

Crystallography, **1**: 332

Electrical conductivity, aqueous solution, **6**: 300

Magnetic susceptibility, **6**: 363

-Anthracene

Freezing point-solubility, **4**: 162

-Carbazole

Freezing point-solubility, **4**: 160

-Catechol

Freezing point-solubility, **4**: 138

-Hydroquinol

Freezing point-solubility, **4**: 140

-Methylacridine

Freezing point-solubility, **4**: 162

-Naphthol (α -, β -)

Freezing point-solubility, **4**: 156, 157

-Nitrosodimethylaniline

Freezing point-solubility, **4**: 154

-Phenanthrene

Freezing point-solubility, **4**: 162

-Phenol

Freezing point-solubility, **4**: 137

-Resorcinol

Freezing point-solubility, **4**: 139

Acrine, optical rotatory power, **7**: 477

Acrolein

Absorption spectra, **5**: 331, 336

Ultra-violet, **5**: 374, 376, 377

Electrical conductivity, **6**: 143

Refractive index, **7**: 35

Solubility in water, **3**: 387

Toxicology, **2**: 318

Acoustic power, **6**: 458

Acoustic resistivity, **6**: 458

Acoustic valves, **6**: 457

Acoustics, **6**: 450

Acrylic acid

Absorption spectra, ultra-violet, **5**: 377

Electrical conductivity, aqueous solution, **6**: 263

Heat of combustion, **5**: 165

Heat of fusion, **5**: 132

- Actinium**
Boiling point, 1: 102
Melting point, 1: 103
- Actinium series**
Members and constants, 1: 363
- Actinolite**, compressibility, 3: 50
- Actinon**
Adsorption, 1: 364
Diffusion coefficient, 1: 364
Relative solubility, 1: 364
Solubility in non-aqueous liquids, 3: 261
Solubility in water, 3: 255
- Action**, conversion factors, 1: 25
- Activity coefficients**, 7: 224
- Acuity**
Auditory, 1: 94; 6: 450
Visual, 1: 93
- Adaline**
Absorption spectra, ultra-violet, 5: 367
- Adamite**
Density, 1: 119
Refractive index, 1: 119, 172
- Addition reactions**, kinetics of, 7: 123
- Adelite**
Density, 1: 146
Refractive index, 1: 146, 172
- Adhesives**, 2: 217
Tensile strength, 2: 220
- Adiabatic compression**, heat of, 5: 144
- Adipic acid**
Crystallography, 1: 326
Electrical conductivity, aqueous solution, 6: 275
Heat of combustion, 5: 165
- Admiralty brass**, 2: 370, 470, 556
- Admiralty gun metal**, 2: 370, 566, 567
Antimony, effect of, 2: 568
Arsenic, effect of, 2: 566
Arsenical, lead, effect of, 2: 566
- Admiralty metal**, 2: 370, 469, 556, 600
- Admic (alloy)**, 2: 370, 601
- Adrenaline**
Optical rotatory power, 7: 365
- Adsorption**, 3: 249
Gases on solids, 3: 250
Heat of, 5: 139
Liquids on solids, 3: 251
Odors, 1: 359
Radioactive elements, 1: 364
Salts on barium sulfate, 1: 354
- Adular**
Dielectric constant, 6: 99
Heat of formation, 5: 206
Magnetic susceptibility, 6: 364
Specific heat, 5: 101
Thermal expansion, 3: 45
- Adularia**. *See* Adular.
- Advance (alloy)**, 2: 370; *cf.* 480, 601, 606
Electrical conductivity, 6: 169, 170
Magnetic field, effect of, 6: 422
- Aegirite**
Crystal nuclei, formation of, 5: 60
Density, 1: 152
Refractive index, 1: 152, 173
- Aero metal**, 2: 370; *cf.* 464, 537, 542
- Aerodynamics**, 1: 402
- Aerolite (alloy)**, 2: 370; *cf.* 467, 533, 534
- Aeromin (alloy)**, 2: 370, 608; *cf.* 542
Endurance limits, 2: 601
- Aeron (alloy)**, 2: 370
- Afwillite**, refractive index, 7: 24
- Agricolite**
Density, 1: 113
Refractive index, 1: 113, 173
- Agrilite (alloy)**, 2: 370; *cf.* 561, 562, 567
- Aich metal**, 2: 370, 556
- Aikinite**, density, 1: 123
- Air**
Acoustic resistivity, 6: 459
Adsorption by charcoals, 3: 512
- Air.**—(Continued)
Boiling point, 1: 103
Composition, 1: 393
Compressibility, 3: 9
Contact potential, 6: 57
Critical point data, 3: 248
Density, 1: 102; 2: 312; 3: 3
Liquid, 1: 103
Dielectric constant, 6: 77, 78, 105
Dielectric strength, 6: 79, 80
Dispersion formulas, 7: 5, 11
Dissymmetry in emission of electrons freed by X-rays, 6: 5
Electrical conductivity of liquid, 6: 142
X-rays, effect of, 6: 6
Electron emission excited by positive ions, 6: 65
Electrons
Absorption of, by, 6: 61
Attachment of, to form ions, 6: 117
Motion of, in, 6: 116
Secondary emission of, 6: 63
Emission spectra, 5: 277
Gamma rays, absorption coefficient, 6: 21
Heat, convection in, 5: 234
Heat of adsorption on charcoal, 5: 140
Ion pairs produced by β -particles, 6: 121
Ionization by accelerated electrons, 6: 121
Ionization by α -particles, 6: 122
Ionization by β -particles, 6: 121
Ionization by electrons, 6: 120
Ionization by γ -rays, 6: 123
Ionization by phosphorus vapor, 6: 124
Ionization by positive residues, 6: 122
Ionization by X-rays, 6: 123
Ions, diffusivity of, in, 6: 115
Ions, mobility of, in, 6: 111, 112, 114
Ions, recombination of, in, 6: 115
Ions, slow, mobility of, 6: 115
Joule-Thomson effect, 5: 144
Light, transmission of, by, 5: 265
Magnetic susceptibility, 6: 354, 364
Moist, density, formulas for, 1: 71
Photoelectric threshold, 6: 68
Plait point, 3: 248
Polarization of light scattered by, 5: 265
Rate of flow at low pressures, 1: 92
Refractivity, 7: 2
Rubber, permeability of, 2: 272; 5: 76
Solubility in non-aqueous liquids, 3: 264
Solubility in sulfuric acid, 3: 272
Solubility in water, 3: 257
Sound, velocity of, in, 6: 459, 462
Sound, velocity of, in tubes, 6: 466
Specific heat, 1: 103; 5: 80, 81
Surface tension, 1: 103
Liquid, 4: 441, 442
Thermal conductivity, 2: 312; 5: 213, 214
Thermal expansion, 1: 103; 3: 9
Transmission of radiant energy, 5: 268
Vaporization, heat of, 1: 103
Verdet constant, 6: 425
Viscosity, 1: 102; 5: 2
X-rays, absorption coefficient, 6: 16
X-rays, absorption of, relation of ejected electrons, 6: 20
-Acetone*
-Amyl alcohol
Ions, mobility of, in, 6: 114
-Ammonia
Ions, mobility of, in, 6: 113, 114
-Butyl alcohol
Ions, mobility of, in, 6: 114
-Carbon dioxide
Critical region, 3: 374
Diffusion coefficient, 5: 62
Ions, mobility of, in, 6: 113
-Carbon tetrachloride
Ions, mobility of, in, 6: 113
- Air.**—(Continued)
-Chloroform
Ions, mobility of, in, 6: 113
-Ethyl alcohol
Ions, mobility of, in, 6: 112, 114
Viscosity, 5: 6
-Ethyl bromide
Ions, mobility of, in, 6: 112
-Ethylene
Viscosity, 5: 6
-Hydrogen
Diffusion coefficient, 5: 62
Viscosity, 5: 6
-Hydrogen chloride
Ions, mobility of, in, 6: 113
-Methyl alcohol
Ions, mobility of, in, 6: 114
-Methyl iodide
Ions, mobility of, in, 6: 112
-Oxygen
Diffusion coefficient, 5: 62
-Propyl alcohol
Ions, mobility of, in, 6: 114
-Water
Ions, mobility of, in, 6: 112
Viscosity, 5: 6
Air conditioning, 2: 321
Air speed, 1: 403, 404
Air-earth current density, 6: 444
Airfoil sections, characteristics, 1: 410
Airfoils
Pressure distribution on, 1: 407, 409
Ajax metal, 2: 370
Åkermannite
Density, 1: 146
Melting point, 1: 146; 4: 84
Refractive index, 1: 146, 167; 7: 25
-Calcium orthosilicate
Freezing point-solubility, 4: 90, 92
-Calcium silicate
Freezing point-solubility, 4: 85, 89
-Diopside
Freezing point-solubility, 4: 90, 92
-Gehlenite
Density, 3: 135
Freezing point-solubility, 4: 90, 92
-Gehlenite-Grossularite
Freezing point-solubility, 4: 93, 95
-Grossularite
Freezing point-solubility, 4: 90, 92
-Sarcosite
Freezing point-solubility, 4: 90, 92
Akrit (alloy), 2: 370, 593
Alabandite
Density, 1: 127
Refractive index, 1: 127, 166
See also Manganese sulfide.
Aladar (alloy). *See* Alpax.
Alamosite
Density, 1: 117
Melting point, 1: 117
Refractive index, 1: 117, 173
See also Lead metasilicate.
 α -Alanine
Absorption spectra, ultra-violet, 5: 366, 373, 379
Heat of combustion, 5: 167
Hydrolysis, 7: 147
Optical rotatory power, 7: 374
Viscosity, aqueous solution, 5: 20
-Ethyl alcohol
Density, aqueous solution, 3: 126
d-Alanine anhydride
Heat of combustion, 5: 168
Optical rotatory power, 7: 374
Alargan (alloy), 2: 370
Albata (alloy), 2: 370
Albedo, 5: 262
Alberene. *See* Soapstone.
Albertite, properties, 2: 169
Albidur-aluminum, 2: 370

* Data for system will be found under this compound in Index. Full explanation on page vii.

Albin (alloy), 2: 370**Albite**

- Density, 1: 153
- Melting point, 1: 153; 4: 85
- Refractive index, 1: 153, 170; 7: 27
- Specific heat, 2: 101; 5: 100

-Anorthite

- Density, 3: 134
- Freezing point-solubility, 4: 91, 92

-Anorthite-Diopside

- Freezing point-solubility, 4: 95, 96

-Diopside

- Freezing point-solubility, 4: 90, 92

Albumins

- Dielectric constant, aqueous solution, 6: 101

- Refractive index, aqueous solution, 7: 98

Alco bronze, 2: 370**Alcoholic fermentation, kinetics of, 7: 158****Alcohols, optical rotatory power, 7: 360**

See also Names of individual alcohols.

Alcumite (alloy), 2: 370; cf. 578, 600**Aldehydobenzoic acid (*o*-, *m*-, *p*-)**

- Solubility in water, 3: 391; 4: 251, 252

-Benzene

- Freezing point-solubility, 4: 133

1-Aldehydo-2-hydroxy-5-methylbenzene*-Benzene*

- Freezing point-solubility, 4: 134

1-Aldehydo-4-hydroxy-5-methylbenzene*-Benzene*

- Freezing point-solubility, 4: 134

1-Aldehydo-4-hydroxy-6-methylbenzene*-Benzene*

- Freezing point-solubility, 4: 134

Aldoximes

- Transformation, kinetics of, 7: 118

Alfénide (alloy), 2: 370**Alférium (alloy), 2: 370****Algeria, weights and measures, 1: 2****Algiers metal, 2: 370; cf. 476, 557****Algodonite, electrical conductivity, 6: 154****Alizarin**

- Electrical conductivity, 6: 144

-Isoamyl acetate

- Boiling point elevation, 3: 346

-Isobutyl alcohol

- Boiling point elevation, 3: 341

-Nitrobenzene

- Boiling point elevation, 3: 343

-Phenol

- Boiling point elevation, 3: 345

Alkaloids

- Solubility in boric acid-glycerol-water, 4: 428

- Solubility in boric acid solution, 4: 423

- Solubility in water, 4: 253

Allactite

- Density, 1: 127

- Refractive index, 1: 127, 173; 7: 21

Allan red bronze, 2: 370**Allan red metal, 2: 370****Allantoin**

- Absorption spectra, 5: 336, 367

- Crystallography, 1: 324

- Heat of solution in water, 5: 148

Allene, vapor pressure, 3: 209**Allevard steel**

- Electrical conductivity, 6: 200

- Magnetic properties, 6: 386

Allihn's tables, 2: 353**Allo-1-bromocinnamic acid***-Isoamyl acetate*

- Viscosity, 5: 50

Allobrucine, optical rotatory power, 7: 474**Allocinnamic acid**

- Electrical conductivity, aqueous solution, 6: 290

- Freezing point lowering of aqueous solution, 4: 263

Allocinnamic acid.—(Continued)

- Heat of combustion, 5: 165

- Heat of fusion, 5: 134

- Solubility in water, 3: 392

Allocinnamylideneacetic acid

- Heat of combustion, 5: 166

Allomucic acid

- Heat of combustion, 5: 165

Allonic acid

- Optical rotatory power, 7: 397

Allopiperonylacrylic acid

- Electrical conductivity, aqueous solution, 6: 294

- Heat of combustion, 5: 166

Alloxan

- Absorption spectra, 5: 336

- Diffusion in water, 5: 70

- Electrical conductivity, aqueous solution, 6: 265

- Heat of combustion, 5: 167

- Heat of solution in water, 5: 148

-Alloxantin

- Freezing point-solubility in water, 4: 413

Alloxantin

- Absorption spectra, 5: 342

- Electrical conductivity, aqueous solution, 6: 284

- Heat of solution in water, 5: 150

*-Alloxan****Alloys, 2: 358, 370**

- Absorption of light, 5: 250

- Bearing, list of, 2: 391

- British Engineering Standards Association specifications, list of, 2: 386

- Classes, 2: 388

- Composition, table of, 2: 370

- Corrosion resisting, list of, 2: 391

- Density, 2: 358

- Dental, list of, 2: 391

- Die-casting, 2: 375, 475, 476, 534, 546, 557, 601

- Electrical, list of, 2: 391

- Electrical conductivity, 6: 156

- Elongation, 2: 610

- Endurance limits, 2: 595

- Equilibrium diagrams, 2: 400

- Fatigue of, 2: 595

- Ferromagnetism, 6: 370

- Ferrous, equilibrium diagrams, 2: 449

- Fusible, list of, 2: 391

- Hall effect, 6: 417

- Hardness, 2: 610

- Heat of fusion, 2: 459

- Heat resisting, list of, 2: 391

- Kerr effect, 6: 435

- Latent heat of phase change, 2: 458

- Light, list of, 2: 388

- Magnetic susceptibility, 6: 365

- Mechanical properties, 2: 359

- Name index, 2: 370

- Nernst effect, 6: 420

- Non-ferrous, X-ray diffraction data, 2: 356

- Phase equilibrium diagrams, 2: 400

- Physical properties, 2: 358

- Properties, symbols for, 2: 396

- Pyrophoric, list of, 2: 391

- Reduction in area, 2: 610

- Reflectivity, 5: 250, 254

- Refraction of light, 5: 250

- Righi-Leduc effect, 6: 421

- Solubility of gases in, 3: 270

- Sound, velocity of, in, 6: 465

- Specific heat, 5: 118

- Thermal conductivity, 5: 218

- Thermal expansion, 2: 463

- Thermal radiation from, 5: 244

- Thermo-electric power, 6: 215

- Treatments, symbols for, 2: 392

- Thomson coefficient, 6: 228

Alloys.—(Continued)

- Ultimate tensile strength, 2: 610

- Vapor pressure, partial, 3: 284

- Viscosity, 5: 6

- Volume change due to tempering, 2: 477

- Volume change on solidification, 2: 474

- X-ray diffraction data, 1: 348; 2: 356

- Yield point in tension, 2: 610

Allyl acetate

- Density, aqueous solution, 3: 114

- Magnetic susceptibility, 6: 362

- Refractive index, 7: 37

- Specific heat, 5: 109

- Surface tension, 4: 452

- Aqueous solution, 4: 468

Allyl alcohol

- Absorption spectra, 5: 331, 336, 364

- Azeotropic mixtures, 3: 318–320, 323

- Compressibility, 3: 36, 38

- Critical temperature, 3: 248

- Density, 3: 31

- Aqueous solution, 3: 112, 113

- Dielectric absorption, 6: 85

- Dielectric constant, 6: 85

- Diffusion in ethyl alcohol, 5: 74

- Diffusion in methyl alcohol, 5: 72

- Diffusion in water, 5: 70

- Electrical conductivity, 6: 143

- Freezing point lowering of aqueous solution, 4: 262

- Heat of combustion, 5: 164

- Heat of solution in water, 5: 148

- Heat of vaporization, 5: 137

- Inflammability, limits of, 2: 180

- Polarization of light reflected from, 5: 261

- Polarization of light scattered by

- Gas, 5: 265

- Liquid, 5: 266

- Refractive index, 7: 35

- Sound, velocity of, in vapor, 6: 463

- Specific heat, 5: 108

- Surface tension, 4: 449

- Aqueous solution, 4: 467

- Verdet constant, dispersion of, 6: 434

Viscosity

- Aqueous solution, 5: 22

- Liquid, 7: 214

- X-rays, absorption coefficient, 6: 14, 16

-Benzene

- Density, 3: 162

- Diethyl tartrate*

- Density, 3: 162

- Ethyl alcohol*

- Viscosity, 5: 37

- Propyl alcohol*

- Density, 3: 162

Allyl benzoate

- Specific heat, 5: 112

- Verdet constant, 6: 430

Allyl bromide

- Absorption spectra, 5: 331, 336

- Dielectric constant, 6: 85

- Polarization of light scattered by, 5: 266

- Refractive index, 7: 35

- Specific heat, gas, 5: 80

-Pyridine

- Reaction kinetics, 7: 125

Allyl butyrate, specific heat, 5: 111**Allyl chloride**

- Absorption spectra, 5: 331

- Dielectric constant, 6: 85

- Heat of combustion, 5: 168

- Polarization of light scattered by, 5: 266

- Refractive index, 7: 35

- Specific heat, 5: 107

- Gas, 5: 80

Allyl chloroacetate, specific heat, 5: 109**Allyl cyanide, heat of combustion, 5: 167****Allyl dichloroacetate**

- Specific heat, 5: 109

* Data for system will be found under this compound in Index. Full explanation on page vii.

Allyl ethyl etherCritical temperature, **3**: 248Refractive index, **7**: 37*-Isoamyl acetate*Density, **3**: 172Viscosity, **5**: 43**Allyl iodide**Absorption spectra, **5**: 331Dielectric strength, **6**: 85**Allyl isobutyrate**, specific heat, **5**: 111**Allyl isothiocyanate**Absorption spectra, **5**: 332Dielectric constant, **6**: 86Electrical conductivity, **6**: 143Heat of combustion, **5**: 169Refractive index, **7**: 83Surface tension, **4**: 450Thermal conductivity, **5**: 228*-Aniline*Freezing point-solubility, **4**: 114*-Diethylamine*Refractive index, **7**: 83*-Ethyl alcohol*Density, **3**: 158*-Piperidine*Refractive index, **7**: 83*-Sulfur*Solubility, mutual, **3**: 394**Allyl phosphate**Saponification constants, **7**: 137**Allyl propionate**, specific heat, **5**: 110**Allyl sulfide**Critical temperature, **3**: 249Refractive index, **7**: 39**Allyl thiocyanate**Density, **3**: 165Viscosity, **5**: 40; **7**: 215*-Aniline*Viscosity, **5**: 40*-Aniline-Toluene*Viscosity, **5**: 51*-Methylaniline*Density, **3**: 165Viscosity, **5**: 40*-Piperidine*Density, **3**: 165Viscosity, **5**: 40*-Pyridine*Density, **3**: 165Viscosity, **5**: 40*-Toluene*Viscosity, **5**: 40, 51**Allyl trichloroacetate**Specific heat, **5**: 109**Allyl valerate**, specific heat, **5**: 112**Allylacetic acid**Electrical conductivity, aqueous solution, **6**: 269Heat of combustion, **5**: 165**Allylamine**Density, **3**: 28Aqueous solution, **3**: 114Dielectric constant, **6**: 82Electrical conductivity, aqueous solution, **6**: 264Heat of combustion, **5**: 167Heat of solution in water, **5**: 148Refractive index, **7**: 35Surface tension, **4**: 450Aqueous solution, **4**: 467Viscosity, **7**: 214, 220*-Xylene*Distribution coefficients in water, **3**: 425**Allylaniline**Viscosity, **7**: 220**Allylbenzene**Verdet constant, **6**: 430**Allylbenzylmethylphenylammonium bromide**Electrical conductivity, aqueous solution, **6**: 243**Allylbenzylmethylphenylammonium iodide***-Chloroform*Boiling point elevation, **3**: 332**Allyldiethylcarbinol**Heat of combustion, **5**: 164Refractive index, **7**: 45**Allyldimethylcarbinol**Heat of combustion, **5**: 164**Allyldipropylcarbinol**Heat of combustion, **5**: 164Refractive index, **7**: 53**Allylene**Boiling point, **3**: 217Critical temperature, **3**: 248Density, **3**: 28Heat of combustion, **5**: 163Refractivity, **7**: 10Solubility in ethyl ether, **3**: 269

Vapor pressure

Liquid, **3**: 217Solid, **3**: 209*-Hydrogen bromide*Freezing point-solubility, **4**: 186**Allylethylmethyltolylammonium iodide***-Chloroform*Boiling point elevation, **3**: 332**Allylmalonic acid**Decomposition, kinetics of, **7**: 122**Allylmethylbutylcarbinol**Heat of combustion, **5**: 164**Allylmethyl-tert.-butylcarbinol**Heat of combustion, **5**: 164**Allylmethylethylcarbinol**Heat of combustion, **5**: 164**Allylmethylhexylcarbinol**Heat of combustion, **5**: 164**Allylmethylpropylcarbinol**Heat of combustion, **5**: 164Refractive index, **7**: 45**Allylmalonic acid**Heat of combustion, **5**: 165**Allylthiourea**, heat of combustion, **5**: 169**Almandite**Density, **1**: 138Refractive index, **1**: 138, 165Thermal expansion, **3**: 45*See also Garnet.***Aloxite.** *See Alundum.***Alpaca**, properties, **2**: 235**Alpakka (alloy)**, **2**: 370; *cf.* 475, 480**Alpax (alloy)**, **2**: 370; *cf.* 468, 543, 599, 601**Alpha particles**Absorption, **1**: 367, 369Chemical effects, **1**: 366Disintegration of elements by, **1**: 365Electron emission caused by, **1**: 365Gases, stopping power of, for, **1**: 370Ionization of gases by, **1**: 365; **6**: 122Path, nature of, **1**: 369Range in gases, **1**: 369Range in liquids and solids, **1**: 368Saturation current, **1**: 367Stopping power equivalents of air and metals, **1**: 368Velocity in gases, **1**: 369**Altronic acid**Optical rotatory power, **7**: 397**Aludur (alloy)**, **2**: 370; *cf.* 459, 475, 536, 601**Aluman (alloy)**, **2**: 370; *cf.* 468, 537**Alumel (alloy)**, **2**: 370Electrical conductivity, **6**: 194**Alumian**Density, **1**: 137Refractive index, **1**: 137, 166**Alumina.** *See Aluminum oxide.***Aluminite (alloy)**, **2**: 370; *cf.* 537, 601**Aluminite**Density, **1**: 137Refractive index, **1**: 137, 168**Aluminum**Absorption, index of, **5**: 249Band spectra, **5**: 411Boiling point, **1**: 102; **3**: 205**Aluminum.**—(*Continued*)Cathodoluminescence, **5**: 389Commercial, density, **2**: 541Compressibility (cubical), **3**: 46Compressibility (linear), **3**: 48Compression tests, **2**: 538Compton effect, **6**: 18Contact potential, **6**: 57Corbino effect, **6**: 419Critical potentials, **6**: 70

Density

Liquid, **1**: 102; **2**: 457, 463Solid, **1**: 103; **2**: 456Elastic properties, **2**: 540

Electrical conductivity

Liquid, **1**: 103Solid, **1**: 103; **6**: 136, 137, 138Low temperature, **6**: 125, 131Electron emission excited by positive ions, **6**: 65**Electrons**Absorption of, by, **6**: 61Secondary emission of, **6**: 63Transmitted, distribution of velocities of, **6**: 62Transmitted, number of, **6**: 62Transmitted, velocity of, **6**: 62Electrons excited by X-rays, number of, **6**: 5Electrons freed by X-rays, energy of, **6**: 3Emission, spectral, **5**: 253, 255Emission spectra, **5**: 281Endurance limits, **2**: 599, 601, 606Entropy, **5**: 87Ettingshausen effect, **6**: 419Gamma rays, absorption coefficient, **6**: 14, 20, 21Hall effect, **6**: 416, 417Hardness, **2**: 539Heat content, **5**: 87Heat of fusion, **1**: 103; **2**: 458Heat of plastic extension, **5**: 147Heat of transition, **5**: 194Heat of vaporization, **1**: 102Hydrogen, solubility of, in, **3**: 270Impact strength, **2**: 540Isotopes, **1**: 45*J*-Phenomenon, **6**: 1Magnetic susceptibility, **6**: 354Melting point, **1**: 53, 103Nernst effect, **6**: 420Nitrogen, solubility of, in, **3**: 270Oxidized, emission, spectral, **5**: 244Peltier coefficient, **6**: 227Persistent lines, **5**: 323Photoelectric current, **6**: 69Photoelectric threshold, **6**: 68Quantum numbers, **5**: 408Refraction, index of, **5**: 249Righi-Leduc effect, **6**: 421Shear tests, **2**: 538Solution velocity in hydrochloric acid, **5**: 57, 59Sound, velocity of, in, **6**: 465

Specific heat

Liquid, **1**: 103; **5**: 94Solid, **1**: 103; **5**: 85, 87, 92Spectral series, **5**: 394Surface tension, **1**: 103Tensile properties, **2**: 533Thermal conductivity, **5**: 220Crystals, **5**: 231

Thermal expansion

Liquid, **1**: 102; **2**: 463Solid, **1**: 103; **2**: 459Thermochemistry, **5**: 194Thermodynamic potential, **5**: 87Thermoelectric properties, **6**: 214, 225, 226Thomson coefficient, **6**: 228Vapor pressure, **3**: 205Viscosity, **5**: 6, 7

Aluminum.—(Continued)

Volume change on fusion, 2: 474
 Volume change on solidification, 2: 475
 X-radiation from target of, 6: 47
 X-ray absorption limits, 6: 36
 X-ray crystal structure, 1: 340
 X-ray emission spectra, 6: 36
 X-ray series, limiting frequencies, 6: 35
 X-rays

Absorption coefficient, 6: 13–15
 Reflection of, by, 6: 50
 Scattering coefficient, 6: 17
 Scattering, modification by, 6: 17
 Zeeman effect, 5: 420

-Antimony

Equilibrium diagram, 2: 403
 Magnetic susceptibility, 6: 365
 Specific volume, 2: 475
 Thermal conductivity, 5: 223
 Thermoelectric properties, 6: 217

-Antimony-Bismuth

Miscibility relations, 3: 407

-Antimony-Lead

Miscibility relations, 3: 407

-Beryllium

Equilibrium diagram, 2: 402

-Bismuth

Electrical conductivity, 6: 161
 Equilibrium diagram, 2: 401
 Specific heat, 5: 120
 Thermoelectric properties, 6: 216

-Bismuth-Silver

Miscibility relations, 3: 408

-Bismuth-Tin

Miscibility relations, 3: 408

-Cadmium-Copper-Magnesium

Thermal conductivity, 5: 222

-Cadmium-Copper-Magnesium-Manganese

Thermal conductivity, 5: 222

-Cadmium-Copper-Magnesium-Manganese-Zinc

Thermal conductivity, 5: 222

-Cadmium-Tin

Miscibility relations, 3: 407

-Cadmium-Zinc

Equilibrium diagram, 2: 409

-Calcium

Electrical conductivity, 6: 161
 Equilibrium diagram, 2: 401

-Carbon-Chromium-Iron

Electrical conductivity, 6: 173

-Carbon-Copper-Iron-Manganese

Specific heat, 5: 119

-Carbon-Iron

Electrical conductivity, 6: 173

-Carbon-Iron-Manganese-Nickel

Electrical conductivity, 6: 186

-Carbon-Iron-Silicon

Electrical conductivity, 6: 173, 188

-Cerium

Equilibrium diagram, 2: 401

-Chromium

Equilibrium diagram, 2: 402

-Chromium-Copper-Iron

Electrical conductivity, 6: 179

-Chromium-Copper-Iron-Silicon

Thermal conductivity, 5: 222

-Cobalt

Equilibrium diagram, 2: 401

-Copper

Absorption, index of, 5: 251
 Compressibility, 2: 576
 Compression tests, 2: 538
 Density, 2: 541, 576
 Dynamic tests, 2: 576
 Elastic properties, 2: 540
 Electrical conductivity, 6: 161, 167, 196
 Endurance limits, 2: 600, 601, 606
 Equilibrium diagram, 2: 401, 609
 Hardness, 2: 539, 576
 Heat treatment, effect of, 2: 577

-Copper.—(Continued)

Heat of fusion, 2: 459
 Impact strength, 2: 540
 Mechanical properties, 2: 573, 581
 Annealing, effect of, 2: 576
 Cold rolling, effect of, 2: 576
 Heat treatment, effect of, 2: 577
 Mold shrinkage, 2: 542
 Refraction, index of, 5: 251
 Shear tests, 2: 538
 Specific heat, 5: 120
 Tensile properties, 2: 533, 574
 Thermal conductivity, 5: 222
 Thermal expansion, 2: 464, 467
 Thermoelectric properties, 6: 216
 Torsional strength, 2: 576
 Volume change due to tempering, 2: 477
 Volume change on solidification, 2: 475
 X-ray diffraction data, 1: 344, 349

-Copper-Gold

Hardness, 2: 586

-Copper-Iron

Electrical conductivity, 6: 180
 Hardness, 2: 578
 Mechanical properties, 2: 578
 Heat treatment, effect of, 2: 579
 Tensile properties, 2: 578
 Thermal conductivity, 5: 223
 Young's modulus, 2: 578

-Copper-Iron-Magnesium

Density, 2: 541
 Tensile properties, 2: 534

-Copper-Iron-Manganese

Hardness, 2: 579

-Copper-Iron-Manganese-Silicon

Electrical conductivity, 6: 163
 Thermal conductivity, 5: 222

-Copper-Iron-Manganese-Silicon-Zinc

Thermal conductivity, 5: 223

-Copper-Iron-Manganese-Tin-Zinc

Thermal conductivity, 5: 223

-Copper-Iron-Nickel-Silicon

Electrical conductivity, 6: 162, 163

-Copper-Iron-Nickel-Silicon-Zinc

Electrical conductivity, 6: 163

-Copper-Iron-Silicon

Density, 2: 541
 Electrical conductivity, 6: 162
 Thermal conductivity, 5: 222

-Copper-Iron-Silicon-Zinc

Compression tests, 2: 538
 Electrical conductivity, 6: 164
 Shear and torsion tests, 2: 539
 Thermal conductivity, 5: 222

-Copper-Iron-Zinc

Compression tests, 2: 538
 Tensile properties, 2: 538

-Copper-Magnesium

Density, 2: 542
 Elastic properties, 2: 540
 Equilibrium diagram, 2: 405, 406
 Impact strength, 2: 540
 Mechanical properties, 2: 544

-Copper-Magnesium-Manganese

Density, 2: 542
 Impact strength, 2: 540

-Copper-Magnesium-Manganese-Nickel

Impact strength, 2: 540

-Copper-Magnesium-Manganese-Zinc

Density, 2: 542
 Elastic properties, 2: 541
 Impact strength, 2: 540
 Tensile properties, 2: 538

-Copper-Magnesium-Nickel

Density, 2: 541, 542
 Elastic properties, 2: 540
 Endurance limits, 2: 601, 608
 Impact strength, 2: 540
 Mold shrinkage, 2: 542

-Copper-Magnesium-Nickel-Silicon

Tensile properties, 2: 534

Aluminum.—(Continued)

-Copper-Magnesium-Silicon
 Endurance limits, 2: 601, 608
 Equilibrium diagram, 2: 409–412
 Tensile properties, 2: 534

-Copper-Manganese

Curie point, 6: 410
 Density, 2: 541, 580
 Dynamic stress tests, 2: 580
 Elastic properties, 2: 540, 580
 Electrical conductivity, 6: 168
 Endurance limits, 2: 600
 Equilibrium diagram, 2: 406
 Hardness, 2: 580
 Annealing, effect of, 2: 580
 Impact strength, 2: 540
 Joule effect, 6: 440
 Magnetic properties, 6: 407
 Mechanical properties
 Annealing, effect of, 2: 580
 Heat treatment, effect of, 2: 581

-Copper-Manganese-Silicon

Mold shrinkage, 2: 542
 Specific heat, 5: 121
 Tensile properties, 2: 534, 579
 Thermal expansion, 2: 468
 Torsional tests, 2: 580
 X-ray diffraction data, 1: 349

-Copper-Manganese-Silicon

Elastic properties, 2: 540
 Thermal expansion, 2: 468

-Copper-Manganese-Zinc

Mechanical properties, 2: 556

-Copper-Nickel

Electrical conductivity, 6: 167
 Endurance limits, 2: 600
 Equilibrium diagram, 2: 406, 407
 Mechanical properties, 2: 543, 581
 Mold shrinkage, 2: 543

-Copper-Phosphorus

Electrical conductivity, 6: 168
 Mechanical properties, 2: 583

-Copper-Silicon

Hardness, 2: 583
 Mold shrinkage, 2: 543
 Thermal expansion, 2: 468

-Copper-Tin

Equilibrium diagram, 2: 408
 Thermal conductivity, 5: 223
 Volume change on solidification, 2: 476

-Copper-Tin-Zinc

Density, 2: 541
 Elastic properties, 2: 540
 Impact strength, 2: 540
 Mold shrinkage, 2: 542
 Tensile properties, 2: 536

-Copper-Zinc

Density, 2: 541, 542
 Elastic properties, 2: 541
 Endurance limits, 2: 601, 608
 Equilibrium diagram, 2: 407, 408
 Hardness, 2: 539
 Impact strength, 2: 540
 Mechanical properties, 2: 546, 556
 Mold shrinkage, 2: 542
 Shear tests, 2: 539
 Tensile properties, 2: 537

-Gold

Equilibrium diagram, 2: 402

-Iron

Electrical conductivity, 6: 162, 172, 173
 Equilibrium diagram, 2: 403
 Magnetic properties, 6: 390
 Mechanical properties, 2: 542
 Thermoelectric properties, 6: 216

-Iron-Silicon

Electrical conductivity, 6: 162, 195
 Thermal conductivity, 5: 222

-Iron-Tin

Electrical conductivity, 6: 173

-Lead

Thermoelectric properties, 6: 217

Aluminum.—(Continued)

- Lead-Silver
 - Miscibility relations, **3**: 408
- Lead-Tin
 - Miscibility relations, **3**: 408
- Lead-Zinc
 - Impact strength, **2**: 540
- Magnesium
 - Electrical conductivity, **6**: 162
 - Emission, spectral, **5**: 254
 - Endurance limits, **2**: 601, 604, 608
 - Equilibrium diagrams, **2**: 403
 - Mechanical properties, **2**: 542, 544
 - Mold shrinkage, **2**: 543
 - Specific heat, **5**: 120
 - Thermal conductivity, **5**: 223
 - Thermal expansion, **2**: 464
 - Thermoelectric properties, **6**: 216
 - X-ray diffraction data, **1**: 344, 349
- Magnesium-Manganese
 - Thermal conductivity, **5**: 223
- Magnesium-Nickel
 - Electrical conductivity, **6**: 163
 - Mechanical properties, **2**: 544
- Magnesium-Silicon
 - Endurance limits, **2**: 601
 - Equilibrium diagram, **2**: 408
 - Tensile properties, **2**: 536
- Magnesium-Zinc
 - Mechanical properties, **2**: 545
- Manganese
 - Electrical conductivity, **6**: 163
 - Equilibrium diagram, **2**: 403
 - Hardness, **2**: 539
 - Mechanical properties, **2**: 542
 - Mold shrinkage, **2**: 543
 - Shear tests, **2**: 538
 - Tensile properties, **2**: 536
 - Thermoelectric properties, **6**: 216
- Mercury
 - Equilibrium diagram, **2**: 403
 - Vapor pressure, partial, **3**: 284
- Nickel
 - Curie points, **6**: 409
 - Electrical conductivity, **6**: 163, 193
 - Equilibrium diagram, **2**: 404
 - Mechanical properties, **2**: 543
 - Mold shrinkage, **2**: 543
 - Thermoelectric properties, **6**: 217
 - X-ray diffraction data, **1**: 344
- Platinum
 - Equilibrium diagram, **2**: 404
- Selenium
 - Equilibrium diagram, **2**: 403
 - Freezing point-solubility, **4**: 27
- Silicon
 - Density, **2**: 594
 - Endurance limits, **2**: 599, 601, 608
 - Equilibrium diagram, **2**: 404
 - Mechanical properties, **2**: 543
 - Mold shrinkage, **2**: 543
 - Thermal expansion, **2**: 464, 468
- Silver
 - Electrical conductivity, **6**: 160
 - Equilibrium diagram, **2**: 401
 - Hardness, **2**: 584
 - Specific heat, **5**: 119
 - Thermoelectric properties, **6**: 215
 - X-ray diffraction data, **1**: 349
- Tellurium
 - Equilibrium diagrams, **2**: 404
 - Freezing point-solubility, **4**: 29
- Tin
 - Electrical conductivity, **6**: 163
 - Equilibrium diagram, **2**: 404
 - Thermal conductivity, **5**: 223
 - Thermoelectric properties, **6**: 217
- Tin-Zinc
 - Equilibrium diagram, **2**: 410
- Titanium
 - Equilibrium diagram, **2**: 405
- Vanadium
 - Specific heat, **5**: 120

Aluminum.—(Continued)

- Zinc
 - Compressibility, **2**: 548
 - Compression tests, **2**: 538
 - Density, **2**: 541, 548
 - Elastic properties, **2**: 540
 - Electrical conductivity, **6**: 163
 - Endurance limits, **2**: 600
 - Equilibrium diagram, **2**: 405
 - Hardness, **2**: 539
 - Impact strength, **2**: 540
 - Magnetic susceptibility, **6**: 365
 - Mechanical properties, **2**: 546
 - Shear tests, **2**: 538
 - Specific heat, **5**: 120
 - Tensile properties, **2**: 536
 - Thermal conductivity, **5**: 223
 - Thermal expansion, **2**: 464, 467, 468
 - Thermoelectric properties, **6**: 217
 - X-ray diffraction data, **1**: 349
- Aluminum ammonium chloride
 - Heat of formation, **5**: 194
- Aluminum ammonium fluoride
 - Heat of formation, **5**: 194
- Aluminum ammonium sulfate
 - Absorption spectra, solutions, **5**: 327
 - Boiling point elevation in aqueous solution, **3**: 325
 - Decomposition pressure of hydrate, **7**: 289
 - Density, aqueous solution, **3**: 71
 - Dielectric constant, **6**: 99
 - Electrical conductivity, **6**: 154
 - Emission, spectral, **5**: 259
 - Heat of formation, **5**: 194
 - Refractive index, **7**: 13, 14
 - Specific heat, aqueous solution, **5**: 123
 - Vapor pressure, aqueous solution, **3**: 367
 - Vapor pressure lowering in aqueous solution, **3**: 295
- Aluminum barium chloride
 - Heat of formation, **5**: 199
- Phosgene
 - Vapor pressure, **3**: 358
- Aluminum bromide
 - Ammine
 - Decomposition pressure, **7**: 289
 - Heat of decomposition, **7**: 289
 - Density
 - Aqueous solution, **3**: 70
 - Liquid, **3**: 23
 - Electrical conductivity, **6**: 148
 - Aqueous solution, **6**: 234
 - Freezing point lowering in aqueous solution, **4**: 257
 - Heat of formation, **5**: 194
 - Magnetic susceptibility, **6**: 359
 - Transition temperature, **4**: 7
- Aluminum chloride
 - Freezing point-solubility, **4**: 61
- Aluminum iodide
 - Freezing point-solubility, **4**: 62
- Ammonium bromide
 - Freezing point-solubility, **4**: 45
 - Solubility, mutual, **3**: 393
- Antimony tribromide
 - Density, **3**: 133
 - Electrical conductivity, **6**: 150
 - Freezing point-solubility, **4**: 47
- Arsenous bromide
 - Freezing point-solubility, **4**: 46
- Barium bromide
 - Freezing point-solubility, **4**: 62
 - Solubility, mutual, **3**: 393
- Benzene
 - Distribution coefficients in water, **3**: 422
 - Freezing point-solubility, **4**: 202
- Benzenesulfone chloride-Carbon disulfide
 - Boiling point elevation, **3**: 348
- Benzophenone
 - Freezing point-solubility, **4**: 202
- Benzophenone-Carbon disulfide
 - Boiling point elevation, **3**: 348

Aluminum bromide.—(Continued)

- Benzoyl chloride
 - Freezing point-solubility, **4**: 202
- Benzoyl chloride-Carbon disulfide
 - Boiling point elevation, **3**: 348
- Bismuth tribromide
 - Freezing point-solubility, **4**: 48
- Bromine
 - Boiling point elevation, **3**: 324
 - Freezing point lowering, **4**: 36
- Bromonitrobenzene (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 201
- Cadmium bromide
 - Freezing point-solubility, **4**: 55
- Calcium bromide
 - Freezing point-solubility, **4**: 62
 - Solubility, mutual, **3**: 393
- Carbon disulfide
 - Boiling point elevation, **3**: 331
- Carbon disulfide-*p*-Dibromobenzene
 - Boiling point elevation, **3**: 348
- Carbon disulfide-Phosphorus oxychloride
 - Boiling point elevation, **3**: 348
- Carbon tetrabromide
 - Freezing point-solubility, **4**: 48, 201
- Chloronitrobenzene (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 201, 202
- Ethyl bromide
 - Boiling point elevation, **3**: 336
- Ethylene bromide
 - Freezing point-solubility, **4**: 201
- Ferrous bromide
 - Freezing point-solubility, **4**: 60
- Lead bromide
 - Freezing point-solubility, **4**: 51
 - Solubility, mutual, **3**: 393
- Lithium bromide
 - Freezing point-solubility, **4**: 62
- Magnesium bromide
 - Freezing point-solubility, **4**: 62
- Manganous bromide
 - Freezing point-solubility, **4**: 60
- Mercuric bromide
 - Density, **3**: 134
 - Freezing point-solubility, **4**: 56
- Mercurous bromide
 - Freezing point-solubility, **4**: 56
 - Solubility, mutual, **3**: 393
- Nitrobenzene
 - Freezing point-solubility, **4**: 202
- Nitrotoluene (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 202
- Phosphorus tribromide
 - Freezing point-solubility, **4**: 45
- Potassium bromide
 - Density, **3**: 134
 - Electrical conductivity, **6**: 151
 - Freezing point-solubility, **4**: 62
 - Solubility, mutual, **3**: 393
- Silver bromide
 - Freezing point-solubility, **4**: 59
 - Solubility, mutual, **3**: 393
- Sodium bromide
 - Freezing point-solubility, **4**: 62
 - Solubility, mutual, **3**: 393
- Stannic bromide
 - Freezing point-solubility, **4**: 49
- Stannous bromide
 - Freezing point-solubility, **4**: 49
 - Solubility, mutual, **3**: 393
- Thallium bromide
 - Freezing point-solubility, **4**: 54
 - Solubility, mutual, **3**: 393
- Toluene
 - Distribution coefficients in water, **3**: 422
 - Freezing point-solubility, **4**: 202
- p*-Xylene
 - Freezing point-solubility, **4**: 202
- Zinc bromide
 - Freezing point-solubility, **4**: 54
- Aluminum bronze
 - Electrical conductivity, **6**: 162, 167

Aluminum calcium chloride

Heat of formation, 5: 197

-Phosgene

Vapor pressure, 3: 357

Aluminum carbide

Heat of formation, 5: 194

Aluminum cesium sulfate

Boiling point elevation in aqueous solution, 3: 326

Decomposition pressure of hydrate, 7: 311

Density, 1: 161

Aqueous solution, 3: 107

Dielectric constant, 6: 99

Magnetic susceptibility, 6: 360

Refractive index, 1: 161, 165

Solubility in water, 4: 244

Vapor pressure of aqueous solution, 3: 374

Aluminum chlorate

Freezing point lowering in aqueous solution, 4: 257

Aluminum chloride

Absorption spectra, 5: 329

Solutions, 5: 327, 328

Ammines

Decomposition pressure, 7: 288

Heat of formation, 5: 194

Specific heat, 5: 98

Boiling point elevation in aqueous solution, 3: 325

Density

Aqueous solution, 3: 70

Liquid, 3: 23

Electrical conductivity, aqueous solution, 6: 231, 233

Freezing point lowering of aqueous solution, 4: 257

Heat of formation, 5: 194

Hydrolysis constant, 7: 288

Magnetic susceptibility, 6: 359

Refractive index, aqueous solution, 7: 71

Dispersion, 7: 101

Specific heat, 5: 98

Aqueous solution, 5: 123

Sulfur dioxide complexes, decomposition pressure, 7: 288

Vapor pressure, 3: 208

Vapor pressure lowering in aqueous solution, 3: 295

-Aluminum bromide***-Ammonium chloride**

Freezing point-solubility, 4: 45

Solubility, mutual, 3: 393

-Ammonium ferrous sulfate

Density, aqueous solution, 3: 98

-Antimony trichloride

Freezing point-solubility, 4: 47

-Barium chloride

Freezing point-solubility, 4: 61

Solubility, mutual, 3: 393

-Barium sulfate

Solubility in water, 7: 344

-Benzene

Freezing point-solubility, 4: 201

-Benzophenone

Freezing point-solubility, 4: 201

-Benzoyl chloride

Freezing point-solubility, 4: 201

-Bromonitrobenzene (o-, m-, p-)

Freezing point-solubility, 4: 200

-Carbon tetrachloride

Freezing point-solubility, 4: 200

-Chloroform

Freezing point-solubility, 4: 200

-Chloronitrobenzene (o-, m-, p-)

Freezing point-solubility, 4: 200

-Cobaltous chloride

Boiling point elevation in aqueous solution, 3: 347

Aluminum chloride.—(Continued)**-Cuprous chloride**

Freezing point-solubility, 4: 57

-Hydrogen chloride

Freezing point-solubility in water, 4: 309

-Lithium chloride

Freezing point-solubility, 4: 61

-Magnesium chloride

Freezing point-solubility, 4: 61

-Manganous chloride

Freezing point-solubility, 4: 60

-Mercuric bromide

Electrical conductivity, 6: 150

-Mercuric chloride

Freezing point-solubility, 4: 56

-Nitrobenzene

Freezing point-solubility, 4: 201

-Nitrotoluene (o-, m-, p-)

Freezing point-solubility, 4: 201

-Phosgene

Density, 3: 140

Vapor pressure, 3: 357

-Potassium chloride

Freezing point-solubility, 4: 62

Freezing point-solubility in water, 4: 309

Solubility, mutual, 3: 393

-Pyridine

Boiling point elevation, 3: 342

-Silver chloride

Freezing point-solubility, 4: 58

Solubility, mutual, 3: 393

-Sodium chloride

Freezing point-solubility, 4: 62

Solubility, mutual, 3: 393

-Stannic chloride

Freezing point-solubility, 4: 49

-Stannous chloride

Freezing point-solubility, 4: 49

Solubility, mutual, 3: 393

-Thallium monochloride

Freezing point-solubility, 4: 53

Solubility, mutual, 3: 393

-Thionyl chloride

Boiling point elevation, 3: 328

-Toluene

Freezing point-solubility, 4: 201

Aluminum cyanide

Ammines, decomposition pressure, 7: 289

Aluminum fluoride

Heat of formation, 5: 194

Specific heat, 5: 98

-Calcium fluoride

Freezing point-solubility, 4: 61

-Calcium fluoride-Sodium fluoride

Freezing point-solubility, 4: 75, 81

-Cesium fluoride

Freezing point-solubility, 4: 61

-Lithium fluoride

Freezing point-solubility, 4: 61

-Potassium fluoride

Freezing point-solubility, 4: 61

-Rubidium fluoride

Freezing point-solubility, 4: 61

-Sodium fluoride

Freezing point-solubility, 4: 61

Aluminum hydrazine sulfate

Solubility in water, 4: 226

Aluminum hydride, band spectra, 5: 411**Aluminum hydroxide**

Heat of formation, 5: 194

Ionization constant, 7: 288

Refractive index, 1: 136, 170

Specific heat, 5: 98

-Ammonia

Freezing point-solubility in water, 4: 399

-Ammonium hydroxide

Freezing point-solubility in water, 4: 368

Aluminum hydroxide.—(Continued)**-Ammonium hydroxide-Ammonium nitrate**

Freezing point-solubility in water, 4: 358

-Ammonium hydroxide-Ammonium nitrate-Potassium nitrate

Freezing point-solubility in water, 4: 358

-Sodium hydroxide

Solubility in water, 7: 288

Aluminum hydroxide gels

Adsorption on, 3: 252

Aluminum hydroxyacetate

Freezing point lowering of aqueous solution, 4: 257

Aluminum hydroxylamine sulfate

Decomposition pressure of hydrate, 7: 289

Aluminum iodide**Ammine**

Decomposition pressure, 7: 289

Heat of decomposition, 7: 289

Density, liquid, 3: 23

Electrical conductivity, 6: 148

Heat of formation, 5: 194

-Aluminum bromide***-Carbon disulfide**

Boiling point elevation, 3: 331

-Iodine

Boiling point elevation, 3: 325

Aluminum metasilicate

Unstable forms, 4: 84

-Lithium metasilicate

Density, 3: 134

Aluminum methylammonium sulfate

Decomposition pressure of hydrate, 289

Density, 1: 137

Refractive index, 1: 137, 165

Aluminum nitrate

Absorption spectra, solutions, 5: 327

Density, aqueous solution, 3: 70, 108

Electrical conductivity, aqueous solution, 6: 238

Freezing point lowering in aqueous solution, 4: 257

Freezing point-solubility in water, 4: 363

Hydrolysis in water, 7: 288

Refractive index, aqueous solution, 7: 71

Dispersion, 7: 101

Solubility in water, 4: 226

Specific heat, aqueous solution, 5: 123

-Nitric acid

Density, aqueous solution, 3: 97

Aluminum nitride

Heat of formation, 5: 194

X-ray diffraction data, 1: 344

Aluminum oleate

Dielectric constant, 6: 97

Aluminum orthosilicate**-Lithium orthosilicate**

Density, 3: 134

Aluminum oxide

Albedo, 5: 262

Decomposition pressure, 7: 289

Density, 2: 82, 315

Dielectric constant, 6: 99

Drying agent, value as, 3: 385

Electrons, thermal emission of, 6: 54

Expansion on heating, 2: 84

Fusion temperature, 2: 83

Heat of formation, 5: 194

Luminescence, 5: 389

Magnetic susceptibility, 6: 359

Melting point, 4: 84

Specific heat, 2: 85; 5: 98

Sublimation pressure, 7: 289

Thermal conductivity, 2: 315; 5: 216

Thermal expansion, 2: 83

Thermionic work function, 6: 54

* Data for system will be found under this compound in Index. Full explanation on page vii.

Aluminum oxide.—(Continued)

- Vapor pressure, **3**: 214
 X-ray diffraction data, **1**: 343
See also Corundum.
 -*Aluminum sodium fluoride*
 Freezing point-solubility, **4**: 61
 -*Anorthite*
 Eutectic point, **4**: 85
 -*Barium oxide*
 Freezing point-solubility in water, **4**: 380
 -*Barium oxide-Silica*
 Freezing point-solubility, **4**: 92
 -*Calcium fluoride-Cryolite*
 Density, **3**: 135
 -*Calcium oxide*
 Freezing point-solubility, **4**: 85, 87
 -*Calcium oxide-Ferric oxide*
 Freezing point-solubility, **4**: 92
 -*Calcium oxide-Magnesium oxide*
 Freezing point-solubility, **4**: 94, 96
 -*Calcium oxide-Silica*
 Freezing point-solubility, **4**: 93, 95
 -*Cobaltous oxide*
 Freezing point-solubility, **4**: 85
 -*Cryolite*
 Density, **3**: 134
 -*Ferric oxide*
 Freezing point-solubility, **4**: 85
 -*Lithium oxide*
 Freezing point-solubility, **4**: 85
 -*Lithium oxide-Silica*
 Freezing point-solubility, **4**: 92
 -*Magnesium oxide*
 Freezing point-solubility, **4**: 85, 87
 -*Magnesium oxide-Silica*
 Freezing point-solubility, **4**: 92, 93
 -*Manganese oxide-Silica*
 Freezing point-solubility, **4**: 92
 -*Manganese oxide-Titanium dioxide*
 Freezing point-solubility, **4**: 92
 -*Potassium oxide-Silica*
 Freezing point-solubility, **4**: 92
 -*Silica*
 Freezing point-solubility, **4**: 85, 86
 -*Silica-Sodium oxide*
 Freezing point-solubility, **4**: 92
 -*Sodium hydroxide*
 Freezing point-solubility in water, **4**: 381, 394

Aluminum phosphate

Reflectivity, selective, **5**: 260

Aluminum potassium chloride

Heat of formation, **5**: 206

Aluminum potassium fluoride

Heat of formation, **5**: 206

Aluminum potassium selenate

Density, **1**: 158

Refractive index, **1**: 158, 165

Aluminum potassium sulfate

Absorption spectra, solutions, **5**: 327

Adsorption on wool, **3**: 252

Boiling point elevation in aqueous solution, **3**: 326

Density, **3**: 44

Aqueous solution, **3**: 92

Saturated, **3**: 106

Dielectric constant, **6**: 77, 99

Aqueous solution, **6**: 104

Dissociation pressure of hydrate, **7**: 307

Freezing point lowering of aqueous solution, **4**: 260

Heat of formation, **5**: 206

Magnetic susceptibility, **6**: 360

Reflectivity, selective, **5**: 260

Refractive index, **7**: 13, 14

Solubility in water, **4**: 242

Specific heat, **5**: 87, 101

Aqueous solution, **5**: 124

Vapor pressure of aqueous solution, **3**: 374

Aluminum potassium sulfate.—(Continued)

-*Aluminum thallium sulfate*

Density, **3**: 134

-*Chromic potassium sulfate*

Freezing point-solubility in water, **4**: 347, 390

-*Ferric potassium sulfate*

Freezing point-solubility in water, **4**: 345, 390

-*Potassium chloride*

Density, aqueous solution, **3**: 100

Aluminum potassium tartrate

Osmotic pressure, **4**: 431

Aluminum rubidium sulfate

Decomposition pressure of hydrate, **7**: 310

Density, **1**: 160

Aqueous solution, **3**: 94

Saturated, **3**: 106

Dielectric constant, **6**: 99

Refractive index, **1**: 160, 165

Solubility in water, **4**: 243

Aluminum silver chloride

Heat of formation, **5**: 194

Aluminum sodium chloride

Heat of formation, **5**: 203

-*Phosgene*

Vapor pressure, **3**: 358

Aluminum sodium fluoride

Heat of formation, **5**: 203

-*Aluminum oxide**

-*Sodium fluoride*

Freezing point-solubility, **4**: 67

Aluminum sodium sulfate

Decomposition pressure of hydrate, **7**: 304

Density, **1**: 153

Refractive index, **1**: 153, 155; **7**: 13

Solubility in water, **4**: 239

Aluminum strontium chloride

-*Phosgene*

Vapor pressure, **3**: 357

Aluminum strontium silicate

-*Anorthite*

Freezing point-solubility, **4**: 92

Aluminum steels

Compression tests, **2**: 529

Density, **2**: 529

Hardness, **2**: 529

Magnetic properties, **6**: 390

Tensile properties, **2**: 529

Thermoelectric properties, **6**: 222

Aluminum sulfate

Absorption spectra, solutions, **5**: 327

Boiling point elevation in aqueous solution, **3**: 325

Density, aqueous solution, **3**: 70, 107

Electrical conductivity, aqueous solution, **6**: 236

Freezing point lowering in aqueous solution, **4**: 257

Heat of formation, **5**: 194

Hydrolysis in water, **7**: 288

Magnetic susceptibility, **6**: 359

Refractive index, aqueous solution, **7**: 71

Solubility in water, **4**: 226

Specific heat, **5**: 98

Aqueous solution, **5**: 123

Surface tension, aqueous solution, **4**: 465

Vapor pressure lowering in aqueous solution, **3**: 295

Viscosity, aqueous solution, **5**: 14

-*Ammonium sulfate*

Density, aqueous solution, **3**: 97

Refractive index, aqueous solution, **7**: 92

Surface tension, aqueous solution, **4**: 470

Viscosity, aqueous solution, **5**: 18

Aluminum sulfate.—(Continued)

-*Ferric sulfate*

Freezing point-solubility in water, **4**: 345

-*Potassium sulfate*

Density, aqueous solution, **3**: 98

Freezing point-solubility in water, **4**: 348

Refractive index, aqueous solution, **7**: 96

Viscosity, aqueous solution, **5**: 19

-*Potassium sulfate-Thallium sulfate*

Density, aqueous solution, **3**: 100

Freezing point-solubility in water, **4**: 337

-*Sodium sulfate*

Density, aqueous solution, **3**: 98

Viscosity, aqueous solution, **5**: 19

-*Sulfuric acid*

Density, aqueous solution, **3**: 96

Freezing point-solubility in water, **4**: 347

Aluminum sulfide

Heat of formation, **5**: 194

Aluminum sulfonbromide

Decomposition pressure, **7**: 289

Aluminum sulfoniodide

Decomposition pressure, **7**: 289

Aluminum thallium sulfate

Decomposition pressure of hydrate, **7**: 289

Density, **1**: 137

Aqueous solution, **3**: 71

Saturated, **3**: 105

Melting point, **1**: 137

Refractive index, **1**: 137, 165

Solubility in water, **4**: 226

-*Aluminum potassium sulfate**

Aluminum thiocyanate

Density, aqueous solution, **3**: 71

Refractive index, aqueous solution, **7**: 71

Aluminum zinc chloride

Heat of formation, **5**: 194

Alumo. *See* Alundum.

Alundum

Density, **2**: 82, 87

Electrical conductivity, **2**: 86

Fusion temperature, **2**: 83

Hardness, **2**: 87

Specific heat, **2**: 85

Thermal conductivity, **2**: 85

Thermal expansion, **2**: 83, 87

Alundum brick

Temperature of failure under load, **2**: 83

Alunite

Density, **1**: 158

Refractive index, **1**: 158, 166

Alunogenite

Density, **1**: 137

Refractive index, **1**: 137, 168

Alzen (alloy), **2**: 371; *cf.* 468, 536

Alzinc (alloy), **2**: 371

Amalgams

Electrical conductivity, **6**: 156

Heat of formation, **5**: 187

Magnetic susceptibility, **6**: 365

Refraction of light by, **5**: 250

Specific heat, **5**: 119

Surface tension, **2**: 591

Thermal expansion, **2**: 472

Vapor pressure, partial, **3**: 284

X-ray diffraction data, **1**: 348

See also Systems containing mercury.

Amaloy, **2**: 371

Amarantite

Density, **1**: 128

Refractive index, **1**: 128, 171

Amarine hydrobromide

Refractive index, **7**: 30

Amarine hydrochloride

Refractive index, **7**: 30

* Data for system will be found under this compound in Index. Full explanation on page vii.

Amax metal, 2: 371; cf. 562

Amber

- Contact charge, 6: 57
- Electrical conductivity, 6: 155
- X-rays, effect of, 6: 6
- Verdet constant, 6: 426

Amberite

- Dielectric constant, 2: 310
- Electrical conductivity, 2: 310

Amblygonite

- Density, 1: 150
- Refractive index, 1: 150, 171

Ambrac (alloy), 2: 371, 480; cf. 601, 606

- Electrical conductivity, 2: 480
- Mechanical properties, 2: 480

Ambrion

- Density, 2: 311
- Dielectric strength, 2: 310
- Electrical conductivity, 2: 310
- Strength properties, 2: 311

Ambroid. See Amberite.

American nickel alloy

- Electrical conductivity, 6: 196

Amervan (alloy), 2: 371

Amino acids

- Hydrolysis of, 7: 147
- Solubility in formaldehyde, 4: 400

Aminoacetic acid. See Glycocoll.

p-Aminoacetophenone

- 1-Chloro-2, 4-dinitrobenzene
Freezing point-solubility, 4: 118
- 2, 4, 6-Trinitrotoluene
Freezing point-solubility, 4: 146

2-Aminoanthraquinone

- Quinoline
Boiling point elevation, 3: 346

p-Aminoazobenzene

- Absorption spectra, 5: 348
- Magnetic susceptibility, 6: 363
- Aniline
Boiling point elevation, 3: 345
- Benzene
Distribution coefficients in water, 3: 432
- Stilbene
Freezing point-solubility, 4: 161
- 2, 4, 6-Trinitrotoluene
Freezing point-solubility, 4: 146

Aminoazotoluene

- Magnetic susceptibility, 6: 363

Aminobenzoic acid

- Decomposition, kinetics of, 7: 122
- Potassium nitrate
Freezing point-solubility in water, 4: 418
- Sodium chloride
Freezing point-solubility in water, 4: 418

o-Aminobenzoic acid

- Absorption spectra, 5: 341
- Decomposition, kinetics of, 7: 122
- Electrical conductivity, aqueous solution, 6: 280
- Heat of fusion, 5: 133
- Solubility in water, 3: 391; 4: 252
- Specific heat
Liquid, 5: 111
Solid, 5: 104
- Benzene
Distribution coefficients in water, 3: 430
- Chloroform
Distribution coefficients in water, 3: 430
- Ethyl alcohol
Heat of solution, 5: 152
- Ethyl ether
Distribution coefficients in water, 3: 430
- Methyl alcohol
Heat of solution, 5: 152

m-Aminobenzoic acid

- Absorption spectra, 5: 341
- Electrical conductivity, aqueous solution, 6: 280
- Heat of fusion, 5: 133
- Solubility in water, 4: 252
- Specific heat
Liquid, 5: 111
Solid, 5: 104
- Acetic acid*
- Ethyl alcohol
Heat of solution, 5: 152
- Methyl alcohol
Heat of solution, 5: 152

p-Aminobenzoic acid

- Absorption spectra, 5: 341
- Decomposition, kinetics of, 7: 122
- Heat of fusion, 5: 133
- Electrical conductivity, aqueous solution, 6: 280
- Solubility in water, 4: 252
- Specific heat
Liquid, 5: 111
Solid, 5: 104
- Ethyl alcohol
Heat of solution, 5: 152
- Methyl alcohol
Heat of solution, 5: 152

Aminobenzyl-β-naphthol

- Optical rotatory power, 7: 364

β-Aminobutyric acid

- Optical rotatory power, 7: 375

Aminocamphor derivatives

- Optical rotatory power, 7: 450

p-Aminodimethylaniline

- Verdet constant, 6: 429

α-Aminohehoic acid

- Optical rotatory power, 7: 375

α-Aminoisovaleric acid

- Heat of combustion, 5: 167

1-Amino-2-nitro-4-chloroaniline

- 1-Amino-3-nitro-4-chloroaniline
Freezing point-solubility, 4: 128

o-Aminophenol

- Silver reduction equivalent, 5: 439
- Solubility in water, 4: 252
- Benzene
Freezing point-solubility, 4: 132
- Cineole
Freezing point-solubility, 4: 142

m-Aminophenol

- Absorption spectra, 5: 339
- Solubility in water, 4: 252
- Aniline
Freezing point-solubility, 4: 141
- Benzene
Freezing point-solubility, 4: 132
- Catechol
Freezing point-solubility, 4: 137
- Cineole
Freezing point-solubility, 4: 142
- Dinitrobenzene (o-, m-)
Freezing point-solubility, 4: 124
- 2, 4-Dinitrotoluene
Freezing point-solubility, 4: 142
- Hydroquinol
Freezing point-solubility, 4: 139
- Naphthol (α-, β-)
Freezing point-solubility, 4: 142
- Naphthylamine (α-, β-)
Freezing point-solubility, 4: 142
- Nitrophenol (o-, m-, p-)
Freezing point-solubility, 4: 129-131
- Phenol
Freezing point-solubility, 4: 135
- Phenylenediamine (o-, m-, p-)
Freezing point-solubility, 4: 142
- Pyrogallol
Freezing point-solubility, 4: 140
- Resorcinol
Freezing point-solubility, 4: 138

m-Aminophenol.—(Continued)

- p-Toluidine
Freezing point-solubility, 4: 142
- p-Aminophenol
Absorption spectra, 5: 339
- Crystallography, 1: 326
- Silver reduction equivalent, 5: 439
- Solubility in water, 4: 252
- Aniline
Freezing point-solubility, 4: 141
- Benzene
Freezing point-solubility, 4: 132
- Naphthol (α-, β-)
Freezing point-solubility, 4: 142
- Phenol
Freezing point-solubility, 4: 135
- Resorcinol
Freezing point-solubility, 4: 138
- p-Toluidine
Freezing point-solubility, 4: 142
- α-Aminopropionic acid
Electrical conductivity, aqueous solution, 6: 264
- d-Aminosuccinic acid
-l-Aminosuccinic acid
Freezing point-solubility, 4: 115
- Aminosulfonic acid
Electrical conductivity, aqueous solution, 6: 260
- Ammonia
Absorption spectra, solutions, 5: 327
- Activity function of vapor in hydrogen and nitrogen, 7: 239
- Adsorption by charcoal, 3: 251
- Birefringence, electric, 7: 110
- Boiling point, 1: 108, 162; 3: 329
- Boiling point elevation in aqueous solution, 3: 329
- Compressibility, 3: 11
- Liquid, 3: 35
- Concentration cell, 6: 324
- Contact potential, 6: 57
- Critical point data, 3: 234, 248
- Critical potentials, 6: 72
- Cryoscopic constant, 4: 214
- Density
Aqueous solution, 3: 59
- Gas, 3: 3, 11
- Liquid, 1: 108; 3: 23
- Saturated vapor, 3: 234
- Dielectric constant
Gas, 6: 75, 79
- Liquid, 6: 76
- Solid, 6: 76
- Diffusion in water, 5: 64
- Dispersion formula, 7: 11
- Distribution coefficient, toluene-water
7: 240
- Electrical conductivity, 6: 142
- Electrons, absorption of, by, 6: 61
- Electrons, attachment of, to form ions, 6: 117
- Free energy, 7: 239
- Liquid, 7: 239
- Reaction with hydrogen sulfide, 7: 241
- Solid, 7: 240
- Solution, 7: 240
- Sublimation, 7: 240
- Vaporization, 7: 239
- Freezing point lowering of aqueous solution, 4: 255, 261
- Heat content
Liquid, 7: 239
- Solid, 7: 240
- Heat of adiabatic expansion, 5: 147
- Heat of adsorption on charcoal, 5: 139, 140
- Heat of adsorption on meerschaum, 5: 141
- Heat of compression, 5: 147

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ammonia.—(Continued)

- Heat of formation, **5**: 178
- Aqueous solution, **5**: 213
- Heat of fusion, **5**: 131
- Heat of sublimation, **7**: 240
- Heat of vaporization, **3**: 207; **5**: 136, 138; **7**: 239
- Ignition temperature, **2**: 173
- Inflammability, limits of, **2**: 176
- Ionization by α -particles, **6**: 122
- Ionization by β -particles, **6**: 121
- Ionization by γ -rays, **6**: 123
- Ions, mobility of, in, **6**: 111
- Magnetic susceptibility, **6**: 356
- Melting point, **1**: 108
- Orthobaric density, **3**: 234
- Photochemical decomposition, **7**: 164
- Quantum sensitivity, **7**: 168
- Polarization of light scattered by, **5**: 265
- Refractive index, **1**: 108, 165; **7**: 8
- Rubber, permeability of, **2**: 272; **5**: 76
- Solubility in aqueous solutions, **3**: 275
- Solubility in non-aqueous liquids, **3**: 264
- Solubility in water, **3**: 259; **4**: 217, 251
- Sound, velocity of, in, **6**: 462, 463
- Specific heat
 - Aqueous solution, **5**: 115
 - Gas, **5**: 80, 83; **7**: 239
 - Liquid, **5**: 86, 114; **7**: 239
 - Solid, **5**: 86, 95; **7**: 240
- Surface tension, **4**: 442, 447
- Thermal conductivity, **5**: 214, 215
- Aqueous solution, **5**: 229
- Thermal expansion, **3**: 11
- Toxicology, **2**: 318
- Vapor pressure
 - Aqueous solution, **3**: 290, 362, 382
 - Liquid, **3**: 213
 - Solid, **3**: 207
- Vapor pressure above 1 atm., **3**: 234
- Viscosity
 - Aqueous solution, **5**: 20
 - Gas, **5**: 3
 - Liquid, **7**: 212
- X-ray diffraction data, **1**: 341
- Acetone*-Methyl alcohol
- Air*
- Aluminum hydroxide*
- Ammonium azide
 - Vapor pressure, **3**: 356
 - Vapor pressure lowering, **3**: 300
- Ammonium bromide
 - Density, **3**: 133
 - Freezing point-solubility, **4**: 44, 77
 - Vapor pressure, **3**: 356; **4**: 44
 - Viscosity, **5**: 26
- Ammonium chloride
 - Density, aqueous solution, **3**: 96
 - Freezing point-solubility, **4**: 44
 - Vapor pressure, aqueous solution, **3**: 376
- Ammonium iodide
 - Freezing point-solubility, **4**: 44
- Ammonium nitrate
 - Boiling point elevation, **3**: 329
 - Density, aqueous solution, **3**: 96
 - Freezing point-solubility, **4**: 44
 - Vapor pressure, **3**: 356
 - Aqueous solution, **3**: 376
- Ammonium nitrate-Ammonium thiocyanate
 - Vapor pressure, **3**: 374
- Ammonium nitrate-Sodium nitrate
 - Density, aqueous solution, **3**: 100
- Ammonium thiocyanate
 - Freezing point-solubility, **4**: 44
 - Vapor pressure, **3**: 357
 - Aqueous solution, **3**: 376
- Amyl alcohol
 - Distribution coefficients in water, **3**: 421

Ammonia.—(Continued)

- Aniline
 - Boiling point elevation, **3**: 329
- Arsenous oxide
 - Freezing point-solubility in water, **4**: 399
- Benzene
 - Boiling point elevation, **3**: 329
- Bromoform
 - Distribution coefficients in water, **3**: 420
- Calcium
 - Partial vapor pressure, **3**: 284
- Calcium chloride
 - Density, aqueous solution, **3**: 96
 - Vapor pressure, aqueous solution, **3**: 376
- Calcium nitrate
 - Vapor pressure, aqueous solution, **3**: 376
- Carbon
 - Equilibrium constant of reaction, **7**: 245
- Carbon dioxide
 - Equilibrium constant of reaction, **7**: 245
- Carbon monoxide
 - Equilibrium constant of reaction, **7**: 245
- Carbon tetrachloride
 - Distribution coefficients in water, **3**: 420
- Catechol
 - Boiling point elevation, **3**: 329
- Chloroform
 - Distribution coefficients in water, **3**: 420
- Cinchonine
 - Freezing point-solubility in water, **4**: 399
- Copper tetramminenitrate
 - Density, **3**: 133
 - Viscosity, aqueous solution, **5**: 26
- Cupric sulfate
 - Density, aqueous solution, **3**: 96
 - Vapor pressure, aqueous solution, **3**: 376
- Cupric thiocyanate
 - Density, aqueous solution, **3**: 96
- Ethyl alcohol
 - Boiling point elevation, **3**: 329
 - Density, **3**: 136
 - Vapor pressure, aqueous solution, **3**: 376
- Ethyl ether
 - Distribution coefficients in water, **3**: 420
- Ethylene
 - Viscosity, **5**: 6
- Ethylenediamine hydrochloride
 - Vapor pressure, **3**: 357
- Hydrazine
 - Vapor pressure, **3**: 356
- Hydrogen
 - Ions, mobility of, in, **6**: 112
 - Viscosity, **5**: 5
- Hydrogen peroxide
 - Freezing point-solubility, **4**: 42
- Hydrogen sulfide
 - Vapor pressure, **3**: 355
- Hydroquinol
 - Boiling point elevation, **3**: 329
- Lithium
 - Boiling point elevation, **3**: 329
 - Partial vapor pressure, **3**: 284
- Lithium chloride
 - Density, aqueous solution, **3**: 96
- Lithium nitrate
 - Vapor pressure, **3**: 357
 - Aqueous solution, **3**: 376

Ammonia.—(Continued)

- Lithium sulfate
 - Density, aqueous solution, **3**: 96
- Mannitol
 - Vapor pressure, aqueous solution, **3**: 376
- Mercuric cyanide
 - Freezing point-solubility in water, **4**: 399
 - Vapor pressure, **3**: 357
- Methyl alcohol
 - Density, **3**: 136
 - Freezing point-solubility, **4**: 212
- Methyl ether
 - Freezing point-solubility, **4**: 212
- Morphine
 - Freezing point-solubility in water, **4**: 399
- o-Nitrophenol
 - Boiling point elevation, **3**: 329
- Phenol
 - Boiling point elevation, **3**: 329
- Potassium
 - Boiling point elevation, **3**: 329
- Potassium chloride
 - Density, aqueous solution, **3**: 96
- Potassium iodide
 - Boiling point elevation, **3**: 329
 - Density, **3**: 133
 - Viscosity, **5**: 26
- Potassium sulfate
 - Vapor pressure, aqueous solution, **3**: 377
- Propyl alcohol
 - Boiling point elevation, **3**: 329
- Pyridine
 - Boiling point elevation, **3**: 329
- Resorcinol
 - Boiling point elevation, **3**: 329
- Silver bromide
 - Density, aqueous solution, **3**: 96
- Silver chloride
 - Density, aqueous solution, **3**: 96
- Silver iodide
 - Density, **3**: 133
 - Viscosity, **5**: 26
- Silver nitrate
 - Density, **3**: 133
 - Viscosity, **5**: 26
- Sodium
 - Boiling point elevation, **3**: 329
 - Partial vapor pressure, **3**: 284
 - Solubility, mutual, **3**: 393
- Sodium acetate
 - Boiling point elevation, **3**: 329
- Sodium iodide
 - Vapor pressure, aqueous solution, **3**: 376
- Sodium nitrate
 - Boiling point elevation, **3**: 329
 - Density, **3**: 133
 - Aqueous solution, **3**: 96
 - Viscosity, **5**: 26
- Sodium sulfate
 - Vapor pressure, aqueous solution, **3**: 377
- Strychnine
 - Freezing point-solubility in water, **4**: 399
- Sucrose
 - Boiling point elevation, **3**: 329
 - Viscosity, **5**: 27
- Sulfur
 - Freezing point-solubility, **4**: 31
- Sulfuric acid
 - Boiling point, **3**: 311, 355
 - Melting point, **3**: 355
- Tetramethylammonium iodide
 - Freezing point-solubility in water, **4**: 399

Ammonia.—(Continued)**-Urea**

- Boiling point elevation, **3**: 329
 Density, **3**: 136
 Vapor pressure, aqueous solution, **3**: 376
 Viscosity, **5**: 27

-Water

- P-V-T* relations, **3**: 17

-m-Xylene

- Solubility, mutual, **3**: 394
 Vapor pressure, **3**: 357

Ammonium acetate

- Density, aqueous solution, **3**: 62, 107; **7**: 67
 Diffusion in water, **5**: 70
 Electrical conductivity, aqueous solution, **6**: 243, 254
 Freezing point lowering of aqueous solution, **4**: 255
 Heat of formation, **5**: 182
 Refractive index, aqueous solution, **7**: 67
 Specific heat, aqueous solution, **5**: 124
 Surface tension, aqueous solution, **4**: 467
 Vapor pressure, **7**: 245
 Viscosity, aqueous solution, **5**: 13

-Acetic acid***-Barium sulfate**

- Solubility in water, **7**: 344

-Butyric acid

- Density, aqueous solution, **3**: 101

-Calcium sulfate

- Freezing point-solubility in water, **4**: 327; **7**: 341

-Isobutyric acid

- Density, aqueous solution, **3**: 101

-Lead sulfate

- Freezing point-solubility in water, **4**: 327; **7**: 318

-Strontium sulfate

- Freezing point-solubility in water, **4**: 327; **7**: 343

Ammonium aluminum sulfate

- Freezing point lowering of aqueous solution, **4**: 257
 Solubility in water, **4**: 226
 Vapor pressure lowering in aqueous solution, **3**: 295

-Glycerol

- Freezing point-solubility in water, **4**: 413

Ammonium antimony sulfate

- Density, **3**: 44

Ammonium antimonyl tartrate

- Crystallography, **1**: 324
 Optical rotatory power, **7**: 354

Ammonium arachidate

- Decomposition pressure, **7**: 246

Ammonium arsenate

- Density, aqueous solution, **3**: 61
-Arsenic acid
 Density, aqueous solution, **3**: 97

Ammonium azide

- Ammine, decomposition pressure, **7**: 241
 Heat of formation, **5**: 178
-Ammonia*

Ammonium benzenesulfonate

- Crystallography, **1**: 326
 Density, aqueous solution, **3**: 63

Ammonium benzoate

- Crystallography, **1**: 327
 Density, aqueous solution, **7**: 69
 Saturated, **3**: 104
 Heat of solution in water, **5**: 150
 Refractive index, aqueous solution, **7**: 69
-Ethyl alcohol
 Density, **3**: 160
 Aqueous solution, **3**: 101; **4**: 405
 Freezing point-solubility in water, **4**: 405

Ammonium bicarbonate

- Heat of formation, **5**: 182
 Solubility in water, **4**: 218
 Vapor pressure, aqueous solution, **3**: 366

-Ammonium chloride

- Density, aqueous solution, **3**: 101

-Ammonium nitrate

- Density, aqueous solution, **3**: 101
 Freezing point-solubility in water, **4**: 357

-Ammonium nitrate-Sodium bicarbonate

- Density, aqueous solution, **3**: 100

-Ammonium sulfate

- Freezing point-solubility in water, **4**: 326

-Sodium bicarbonate

- Density, aqueous solution, **3**: 102
 Freezing point-solubility in water, **4**: 360

-Sodium bicarbonate-Sodium nitrate

- Density, aqueous solution, **3**: 103

-Sodium chloride

- Freezing point-solubility in water, **4**: 293, 384

-Sodium nitrate

- Freezing point-solubility in water, **4**: 358, 391

-Sodium sulfate

- Freezing point-solubility in water, **4**: 326, 387, 388

Ammonium bismuth citrate

- Density, aqueous solution, **3**: 104

Ammonium bisulfite

- Absorption spectra, solutions, **5**: 328
 Heat of formation, **5**: 179
 Magnetic susceptibility, **6**: 356

Ammonium borate

- Heat of formation, **5**: 194

Ammonium bromide

- Absorption spectra, solutions, **5**: 327, 328
 Ammines, decomposition pressure, **7**: 240
 Boiling point elevation in aqueous solution, **3**: 325
 Compressibility, aqueous solution, **3**: 439
 Decomposition pressure, **7**: 240
 Density, aqueous solution, **3**: 60, 107
 Saturated, **3**: 104
 Dielectric constant, **6**: 76, 99
 Electrical conductivity, aqueous solution, **6**: 234, 239
 Emission, spectral, **5**: 259
 Free energy of allotropic transformation, **7**: 240
 Heat of formation, **5**: 179
 Heat of transition, **5**: 179
 Melting point under pressure, **4**: 12
 Residual rays, **5**: 261
 Solubility in organic solvents, **4**: 205-211
 Solubility in water, **4**: 218
 Specific heat, **5**: 95
 Aqueous solution, **5**: 122
 Surface tension, aqueous solution, **4**: 464
 Transference number, **6**: 310
 Transition temperature, **4**: 7
 Vapor pressure, **3**: 207; **7**: 240
 Aqueous solution, **3**: 363
 Vapor pressure lowering in aqueous solution, **3**: 293
 Viscosity, aqueous solution, **5**: 13
 Volume change on melting, **4**: 12
 X-ray diffraction data, **1**: 341
-Aluminum bromide*
-Ammonia*
-Ammonium bromoplatinate
 Freezing point-solubility in water, **4**: 317
-Ammonium chloride
 Freezing point-solubility, **4**: 45

Ammonium bromide.—(Continued)**-Arsenous oxide**

- Freezing point-solubility in water, **4**: 317

-Ethyl alcohol

- Boiling point elevation, **3**: 336
 Density, **3**: 136
 Viscosity, aqueous solution, **5**: 24

-Ethyl alcohol-Glycerol

- Viscosity, **5**: 30

-Ethyl alcohol-Methyl alcohol

- Density, **3**: 142

-Ethyl alcohol-Propyl alcohol

- Density, **3**: 142

-Formamide

- Viscosity, **5**: 27

-Glycerol-Methyl alcohol

- Viscosity, **5**: 30

-Hydrobromic acid

- Density, aqueous solution, **3**: 96

-Mercuric bromide

- Freezing point-solubility, **4**: 45

-Methyl alcohol

- Boiling point elevation, **3**: 333
 Density, **3**: 136

-Methyl alcohol-Propyl alcohol

- Density, **3**: 142

-Potassium bromide

- Density, aqueous solution, **3**: 97
 Freezing point-solubility, **4**: 45
 Freezing point-solubility in water, **4**: 317

-Propyl alcohol

- Density, **3**: 136

Ammonium bromoplatinate

- Solubility in water, **4**: 224

-Ammonium bromide***Ammonium butyrate**

- Density, aqueous solution, **3**: 62

-Acetic acid***-Butyric acid**

- Density, aqueous solution, **3**: 101

-Formic acid

- Density, aqueous solution, **3**: 101

Ammonium cadmium bromide

- Heat of formation, **5**: 186

Ammonium cadmium chloride

- Heat of formation, **5**: 186

Ammonium cadmium iodide

- Heat of formation, **5**: 186

Ammonium cadmium selenate

- Refractive index, **7**: 31

Ammonium cadmium sulfate

- Density, **1**: 120
 Refractive index, **1**: 120, 169; **7**: 31

Ammonium calcium sulfate

- Heat of formation, **5**: 196

Ammonium carbamate, 7: 245**Ammonium carbonate**

- Density, aqueous solution, **3**: 62
 Diffusion in water, **5**: 69
 Heat of formation, **5**: 182
 Solubility in water, **4**: 219
 Vapor pressure, **3**: 207
-Ammonium chloride
 Freezing point-solubility in water, **4**: 292

-Ethyl alcohol

- Freezing point-solubility in water, **4**: 401

-Sodium carbonate

- Freezing point-solubility in water, **4**: 366

-Sodium chloride

- Freezing point-solubility in water, **4**: 292, 383

Ammonium ceric nitrate

- Solubility in water, **4**: 227

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ammonium cerous nitrate
 Magnetic susceptibility, 6: 359
 Solubility in water, 4: 227

Ammonium cerous sulfate
 Solubility in water, 4: 227

Ammonium chlorate
 Density, aqueous solution, 3: 60
 Explosive, properties as, 7: 490

Ammonium chloride
 Absorption spectra, solutions, 5: 327
 Adsorption by charcoal, 3: 252
 Ammines
 Decomposition pressure, 7: 240
 Heat of formation, 5: 179
 Boiling point elevation in aqueous solution, 3: 325
 Compressibility, aqueous solution, 3: 439
 Concentration cell, 6: 324
 Condensation, irreversible, temperature of, 5: 53
 Decomposition pressure, 7: 240
 Density, 1: 108
 Aqueous solution, 3: 60, 107
 Saturated, 3: 104
 Solid, 3: 43
 Dielectric constant, 6: 76, 99
 Diffusion in water, 5: 65
 Electrical conductivity, aqueous solution, 6: 231, 232
 Emission, spectral, 5: 259
 Entropy, 5: 89
 Free energy, 7: 240
 Allotropic transformation, 7: 240
 Freezing mixtures, use in, 1: 63
 Freezing point lowering of aqueous solution, 4: 255
 Glass, effect on, 2: 111
 Heat content, 5: 89
 Heat of allotropic transformation, 7: 240
 Heat of dilution with water, 5: 161
 Heat of formation, 5: 179
 Heat of transition, 5: 179
 Heat of vaporization, 5: 136
 Melting point under pressure, 4: 12
 Refractive index, 1: 108, 165; 7: 12
 Aqueous solution, 7: 66
 Residual rays, 5: 261
 Solubility in organic solvents, 4: 205–211
 Solubility in water, 4: 218
 Specific heat, 5: 89, 95
 Aqueous solution, 5: 122
 Sublimation temperature, 1: 108, 162
 Surface tension, aqueous solution, 4: 464
 Thermal expansion, 3: 43
 Thermodynamic potential, 5: 89
 Transference number, 6: 310
 Transition temperature, 4: 7
 Vapor pressure, 3: 207; 7: 240
 Aqueous solution, 3: 362
 Vapor pressure lowering in aqueous solution, 3: 293
 Viscosity, aqueous solution, 5: 13
 Volume change on melting, 4: 12
 X-ray diffraction data, 1: 341

-Acetone*
-Acetone*-Barium chloride
-Aluminum chloride*
-Ammonia*
-Ammonium bicarbonate*
-Ammonium bromate*
-Ammonium carbonate*
-Ammonium chloroiridate
 Freezing point-solubility in water, 4: 295
-Ammonium chloroplatinate
 Freezing point-solubility in water, 4: 295

Ammonium chloride.—(Continued)
-Ammonium nitrate
 Density, aqueous solution, 3: 97
 Freezing point-solubility, 4: 45
 Viscosity, aqueous solution, 5: 18
-Ammonium nitrate-Lithium nitrate
 Freezing point-solubility, 4: 72
-Ammonium nitrate-Potassium chloride
 Freezing point-solubility, 4: 73
-Ammonium nitrate-Potassium nitrate
 Freezing point-solubility, 4: 73
-Ammonium nitrate-Sodium chloride
 Freezing point-solubility, 4: 72
-Ammonium nitrate-Sodium nitrate
 Freezing point-solubility, 4: 73
-Ammonium oxalate
 Freezing point-solubility in water, 4: 292
-Ammonium sulfate
 Freezing point-solubility in water, 4: 276
-Ammonium tetraborate
 Freezing point-solubility in water, 4: 296
-Antimony trichloride
 Electrical conductivity, 6: 150
 Freezing point-solubility, 4: 45
-Arsenous oxide
 Freezing point-solubility, 4: 292
-Barium chloride
 Density, aqueous solution, 3: 97
 Freezing point-solubility in water, 4: 296
 Viscosity, aqueous solution, 5: 18
-Barium chloride-Cupric chloride
 Freezing point-solubility in water, 4: 295, 384
-Barium oxalate
 Solubility in water, 7: 344
-Barium sulfate
 Solubility in water, 7: 344
-Cadmium chloride
 Boiling point, 3: 311
 Freezing point-solubility, 4: 45, 77
 Vapor pressure, 3: 357
-Calcium hydroxide
 Solubility in water, 7: 340
-Calcium sulfate
 Freezing point-solubility in water, 4: 275; 7: 340
-Cobaltous chloride
 Freezing point-solubility in water, 4: 296, 385
-Cupric chloride
 Freezing point-solubility in water, 4: 295, 384
-Cupric chloride-Potassium chloride
 Freezing point-solubility in water, 4: 295
-Cupric sulfate
 Freezing point-solubility in water, 4: 276, 382
-Cupric sulfate-Potassium sulfate
 Density, aqueous solution, 3: 100
-Cuprous chloride
 Boiling point, 3: 311
 Freezing point-solubility, 4: 45, 77
 Vapor pressure, 3: 357
-Diethyl tartrate
 Density, aqueous solution, 3: 101
-Ethyl alcohol
 Density, 3: 136
 Freezing point-solubility in water, 4: 399
-Ethyl alcohol-Methyl alcohol
 Density, 3: 142
-Ethyl alcohol-Propyl alcohol
 Density, 3: 142
-Ferric chloride
 Density, aqueous solution, 3: 97
 Freezing point-solubility, 4: 45, 77

-Ferric chloride.—(Continued)
 Freezing point-solubility in water, 4: 296, 384, 385
 Vapor pressure, 3: 357
 Viscosity, aqueous solution, 5: 18
-Ferrous chloride
 Freezing point-solubility in water, 4: 296, 384
-Glycerol
 Density, 3: 136
 Aqueous solution, 3: 101
-Hydrogen chloride
 Density, aqueous solution, 3: 95
 Freezing point-solubility in water, 4: 292
-Lead chloride
 Free energy of reaction, 7: 250
 Freezing point-solubility in water, 4: 293; 7: 314
 Vapor pressure, 3: 357
-Lithium carbonate
 Solubility in water, 7: 345
-Lithium chloride
 Boiling point, 3: 311
 Freezing point-solubility, 4: 45, 77
 Vapor pressure, 3: 357
-Magnesium chloride
 Freezing point-solubility in water, 4: 296, 385
-Magnesium chloride-Potassium chloride
 Freezing point-solubility in water, 4: 296
-Manganese chloride
 Density, aqueous solution, 3: 97
 Freezing point-solubility in water, 4: 295, 384
-Mercuric chloride
 Freezing point-solubility, 4: 45
 Freezing point-solubility in water, 4: 294, 384
-Mercuric chloride-Potassium chloride
 Freezing point-solubility in water, 4: 294, 384
-Methyl alcohol
 Density, 3: 136
 Freezing point-solubility in water, 4: 399
-Nickel chloride
 Freezing point-solubility in water, 4: 296, 385
-Phthalic acid
 Density, aqueous solution, 3: 101
 Freezing point-solubility in water, 4: 399
-Potassium chloride
 Density, aqueous solution, 3: 97
 Freezing point-solubility, 4: 45
 Freezing point-solubility in water, 4: 297, 385
 Viscosity, aqueous solution, 5: 18
-Potassium chloride-Sodium chloride
 Density, aqueous solution, 3: 100
-Potassium nitrate
 Vapor pressure, aqueous solution, 3: 377
-Potassium sulfate
 Density, aqueous solution, 3: 97
-Propyl alcohol
 Density, 3: 136
 Freezing point-solubility in water, 4: 399
-Silver chloride
 Solubility in water, 7: 266
-Sodium bicarbonate
 Freezing point-solubility in water, 4: 293, 384
-Sodium carbonate
 Freezing point-solubility in water, 4: 292, 383

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ammonium chloride.—(Continued)

- Sodium chloride*
Boiling point elevation in aqueous solution, **3**: 347
Density, aqueous solution, **3**: 97
Freezing point-solubility, **4**: 45
Freezing point-solubility in water, **4**: 297
Viscosity, aqueous solution, **5**: 18
- Sodium chloride-Sodium nitrate*
Freezing point-solubility, **4**: 75
- Sodium hydroxide*
Freezing point-solubility in water, **4**: 296, 297
- Sodium sulfate*
Freezing point-solubility in water, **4**: 276, 382
- Sodium tetraborate*
Freezing point-solubility in water, **4**: 297, 385
- Sulfuric acid*
Density, aqueous solution, **3**: 96
- Thallium monochloride*
Solubility in water, **7**: 319
Vapor pressure, **3**: 357
- Zinc chloride*
Boiling point, **3**: 311
Freezing point-solubility, **4**: 45, 77
Freezing point-solubility in water, **4**: 293, 384
Vapor pressure, **3**: 357
- Ammonium chloroacetate**
Density, aqueous solution, **3**: 63
- Chloroacetic acid*
Density, aqueous solution, **3**: 101
- Trichloroacetic acid*
Density, aqueous solution, **3**: 101
- Ammonium chloroiridate**
Solubility in water, **4**: 224
- Ammonium chloride**
- Ammonium chloronitrotoluene-*m*-sulfonate**
Solubility in water, **4**: 219
- Ammonium chloropalladite**
X-ray crystal structure, **1**: 342
- Ammonium chloroplatinate**
Magnetic susceptibility, **6**: 357
Solubility in water, **4**: 224
X-ray diffraction data, **1**: 342
- Ammonium chloride**
- Ammonium chloroplatinite**
Heat of formation, **5**: 190
- Ammonium chromate**
Density, aqueous solution, **3**: 70
Electrical conductivity, aqueous solution, **6**: 245
Heat of formation, **5**: 193
Refractive index, aqueous solution, **7**: 71
Solubility in water, **4**: 226
Specific heat, aqueous solution, **5**: 123
Viscosity, aqueous solution, **5**: 14
- Ammonium sulfate*
Freezing point-solubility in water, **4**: 328
- Chromic acid*
Density, aqueous solution, **3**: 98
- Ethyl alcohol*
Photochemical reaction, **7**: 164, 165
- Potassium chromate*
Freezing point-solubility in water, **4**: 368
- Potassium sulfate*
Freezing point-solubility in water, **4**: 329
- Ammonium chromic sulfate**
Decomposition pressure of hydrate, **7**: 286
Density, **1**: 132
Aqueous solution, **3**: 70
Refractive index, **1**: 132, 165; **7**: 13
Solubility in water, **4**: 226

- Ammonium citrate**
Density, aqueous solution, **3**: 62; **7**: 69
Refractive index, aqueous solution, **7**: 69
- Citric acid*
Density, aqueous solution, **3**: 101
- Ammonium cobaltous bromide**
Heat of formation, **5**: 192
- Ammonium cobaltous selenate**
Density, **1**: 131
Emission, spectral, **5**: 259
Reflectivity, selective, **5**: 260
Refractive index, **1**: 131, 170; **7**: 31
- Ammonium cobaltous sulfate**
Density, **1**: 130
Aqueous solution, **3**: 69
Refractive index, **1**: 130, 169; **7**: 31
Dielectric constant, **6**: 99
- Hydrates
Decomposition pressure, **7**: 281
Heat of decomposition, **7**: 281
Magnetic susceptibility, **6**: 358, 364
Aqueous solution, **6**: 364
Solubility in water, **4**: 225
Verdet constant, aqueous solution, **6**: 428
- Ammonium cupric chloride**
Density, **1**: 122
Heat of formation, **5**: 188
Magnetic susceptibility, **6**: 357
Refractive index, **1**: 122, 167
Solubility in water, **4**: 223
Thermal conductivity, **5**: 232
- Ammonium cupric selenate**
Density, **1**: 122
Refractive index, **1**: 122, 170; **7**: 31
- Ammonium cupric sulfate**
Density, **1**: 122
Aqueous solution, **3**: 67
Saturated, **3**: 104
Heat of formation, **5**: 188
Refractive index, **1**: 122, 169; **7**: 31
Solubility in water, **4**: 223
Specific heat, **5**: 97
- Ammonium cyanate**
Heat of formation, **5**: 182
- Ammonium cyanide**
Heat of formation, **5**: 182
Vapor pressure, **3**: 207
- Ammonium cyanoplatinite**
Luminescence, **5**: 389
- Ammonium cyanurate**
Heat of formation, **5**: 182
- Ammonium dibromiodide**
Decomposition pressure, **7**: 241
- Ammonium dichloroacetate**
Density, aqueous solution, **3**: 63
- Dichloroacetic acid*
Density, aqueous solution, **3**: 101
- Hydrogen chloride*
Density, aqueous solution, **3**: 101
- Lactic acid*
Density, aqueous solution, **3**: 101
- Nitric acid*
Density, aqueous solution, **3**: 101
- Trichloroacetic acid*
Density, aqueous solution, **3**: 101
- Ammonium dichlorobromide**
Decomposition pressure, **7**: 240
- Ammonium dichromate**
Density, **3**: 45
Aqueous solution, **3**: 70
Heat of formation, **5**: 193
Solubility in water, **4**: 226
Viscosity, aqueous solution, **5**: 14
- Ethyl alcohol*
Photochemical reaction, **7**: 164, 165
- Ammonium dihydrogen arsenate**
Density, **1**: 110
Refractive index, **1**: 110, 166; **7**: 19
Thermal conductivity, **5**: 231

- Ammonium dihydrogen citrate**
Density, aqueous solution, **3**: 62
- Ammonium dihydrogen phosphate**
Density, **1**: 110
Aqueous solution, **3**: 61
Electrical conductivity, aqueous solution, **6**: 243
Heat of formation, **5**: 180
Magnetic susceptibility, **6**: 356
Refractive index, **1**: 110, 166; **7**: 19
Solubility in water, **4**: 218
Thermal conductivity, **5**: 231
Vapor pressure, aqueous solution, **3**: 363
X-ray diffraction data, **1**: 341
- Ammonium dihydroxytartrate**
Solubility in water, **4**: 219
- Ammonium dithionate**
Density, aqueous solution, **3**: 61
Solubility in water, **4**: 218
Vapor pressure lowering in aqueous solution, **3**: 293
- Barium dithionate*
Freezing point-solubility in water, **4**: 356
- Cupric dithionate*
Freezing point-solubility in water, **4**: 355
- Strontium dithionate*
Freezing point-solubility in water, **4**: 356
- Ammonium ferric chloride**
Magnetic susceptibility, **6**: 358
- Ammonium ferric fluoride**
Magnetic susceptibility, **6**: 358
X-ray diffraction data, **1**: 343
- Ammonium ferric oxalate**
Decomposition pressure of hydrates, **7**: 278
Refractive index, **7**: 22
- Ammonium ferric sulfate**
Absorption spectra, solutions, **5**: 327
Decomposition pressure of hydrate, **7**: 278
Density, **1**: 128
Aqueous solution, **3**: 68
Heat of formation, **5**: 191
Magnetic susceptibility, **6**: 358
Refractive index, **1**: 128, 165; **7**: 13
X-ray diffraction data, **1**: 343
- Ammonium ferrocyanide**
Heat of formation, **5**: 191
- Ammonium ferrous nitrate**
Heat of formation, **5**: 191
- Ammonium ferrous selenate**
Density, **1**: 128
Refractive index, **1**: 128, 170; **7**: 31
- Ammonium ferrous sulfate**
Density, **1**: 128
Aqueous solution, **3**: 68
Saturated, **3**: 104
Electrical conductivity, aqueous solution, **6**: 244
Magnetic susceptibility, **6**: 358, 364
Aqueous solution, **6**: 364
Refractive index, **1**: 128, 169; **7**: 31
Solubility in water, **4**: 225
Verdet constant, aqueous solution, **6**: 428
- Aluminum chloride**
- Ammonium fluoride**
Density, aqueous solution, **3**: 60
Electrical conductivity, aqueous solution, **6**: 231, 232
Heat of formation, **5**: 179
Refractive index, aqueous solution, **7**: 66
- Antimony oxalate*
Freezing point-solubility in water, **4**: 273
- Ammonium fluosilicate**
Heat of formation, **5**: 182
X-ray diffraction data, **1**: 341

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ammonium fluozirconate

Solubility in water, 4: 219
X-ray diffraction data, 1: 341

Ammonium formate

Density, aqueous solution, 3: 61, 107
Heat of formation, 5: 182
Solubility in water, 4: 218
Specific heat, aqueous solution, 5: 124
Surface tension, aqueous solution, 4: 467

*-Acetic acid***-Butyric acid*

Density, aqueous solution, 3: 101

-Formamide

Density, 3: 149

Viscosity, 5: 33

-Formic acid

Density, 3: 148

Aqueous solution, 3: 101

Freezing point-solubility, 4: 99

Viscosity, 5: 33

-Isobutyric acid

Density, aqueous solution, 3: 101

-Lactic acid

Density, aqueous solution, 3: 101

-Sodium salicylate

Surface tension, aqueous solution, 4: 470

-Trichloroacetic acid

Density, aqueous solution, 3: 101

Ammonium gallium sulfate

Density, 1: 117
Refractive index, 1: 117, 165
Solubility in water, 4: 220

-Ethyl alcohol

Freezing point-solubility in water, 4: 406

-Ethyl alcohol-Sulfuric acid

Freezing point-solubility in water, 4: 424

Ammonium glycolate

Density, aqueous solution, 3: 62
Heat of solution in water, 5: 148

-Formic acid

Density, aqueous solution, 3: 101

Ammonium heptafluorohafnate

Refractive index, 1: 140, 165
Solubility in water, 4: 228

Ammonium heptafluorozirconate

Refractive index, 1: 114, 165
Solubility in water, 4: 219

Ammonium heptamolybdate

Density, aqueous solution, 3: 70
Refractive index, aqueous solution, 7: 71

-Tartaric acid

Density, aqueous solution, 3: 102

Ammonium hexafluorohafnate

Solubility in water, 4: 228

Ammonium hydrogen formate

Solubility in water, 4: 219

Ammonium hydrogen malate

Crystallography, 1: 325
Density, aqueous solution, 3: 62

Ammonium hydrogen oxalate

Crystallography, 1: 324
Density, aqueous solution, 3: 62
Heat of formation, 5: 182

Ammonium hydrogen phosphate

Density, aqueous solution, 3: 61, 104
Electrical conductivity, aqueous solution, 6: 243

Heat of formation, 5: 180

Solubility in water, 4: 218

Surface tension, aqueous solution, 4: 464

-Potassium manganate

Density, aqueous solution, 3: 97

Ammonium hydrogen phosphite

Density, aqueous solution, 3: 61

Ammonium hydrogen succinate

Density, aqueous solution, 3: 62
Heat of solution in water, 5: 149

Ammonium hydrogen sulfate

Allotropic forms, 4: 12

Density, aqueous solution, 3: 60

Diffusion in water, 5: 65

Electrical conductivity, aqueous solution, 6: 243

Heat of formation, 5: 179

Melting point under pressure, 4: 12, 17

Refractive index, 7: 19

Transition temperature, 4: 7

Triple points, 4: 12

Vapor pressure lowering in aqueous solution, 3: 293

Volume change on melting, 4: 12

Ammonium hydrogen tartrate

Crystallography, 1: 325

Density, aqueous solution, 7: 68

Heat of formation, 5: 182

Refractive index, 7: 29

Aqueous solution, 7: 68

Ammonium hydroselenite

Density, aqueous solution, 3: 61

Heat of formation, 5: 179

Ammonium hydrosulfide

Free energy of formation, 7: 241

Heat of formation, 5: 179; 7: 241

Vapor pressure, 3: 207

Ammonium hydroxide

Compressibility, 3: 439

Density, 3: 59

Maximum, temperature of, 3: 107

Dielectric constant, 6: 104

Electrical conductivity, 6: 260

Free energy, 7: 240

Ionization, 7: 240

Freezing point lowering of aqueous solution, 4: 255

Heat of formation, 5: 179, 213

Ionization constant, 7: 240

Refractive index, 7: 66

Sound, velocity of, in, 6: 464

Specific heat, 5: 115

Surface tension, 4: 464

Thermal conductivity, 5: 229

Vapor pressure, 3: 290, 362, 382

Verdet constant, 6: 426

Viscosity, 5: 13, 20

*-Aluminum hydroxide**

-Aluminum hydroxide-Ammonium nitrate*

-Aluminum hydroxide-Ammonium nitrate-Potassium nitrate*

Ammonium sulfate

Freezing point-solubility in water, 4: 326

-Boric acid

Freezing point-solubility in water, 4: 368

-Carbonic acid

Freezing point-solubility in water, 4: 367

-Chromic acid

Freezing point-solubility in water, 4: 367, 392

-Citric acid

Refractive index, aqueous solution, 7: 92

-Cuprous oxide

Freezing point-solubility in water, 4: 367

-Metaarsenious acid

Freezing point-solubility in water, 4: 366

-Orthophosphorous acid

Refractive index, aqueous solution, 7: 92

-Periodic acid

Refractive index, aqueous solution, 7: 91

Ammonium hydroxide.—(Continued)*-Phosphoric acid*

Freezing point-solubility in water, 4: 365, 392

-Potassium carbonate

Miscibility of, 3: 409

-Selenous acid

Refractive index, aqueous solution, 7: 91

-Silver bromide

Reaction in water, 7: 270

Solubility in water, 7: 270

-Silver chloride

Freezing point-solubility in water, 4: 295

Reaction in water, 7: 269

Solubility in water, 7: 269

-Silver chromate

Solubility in water, 7: 287

-Silver oxide

Solubility in water, 7: 272

-Sodium hydroxide

Density, aqueous solution, 3: 97

-Sulfuric acid

Freezing point-solubility in water, 4: 325, 387

-Tetramethylammonium iodide

Freezing point-solubility in water, 4: 319; 7: 314

Ammonium hydroxyethylsulfonate

Density, aqueous solution, 3: 63

Ammonium indium sulfate

Density, 1: 117
Refractive index, 1: 117, 165

Ammonium iodate

Electrical conductivity, aqueous solution, 6: 242

Solubility in water, 4: 218

-Iodic acid

Freezing point-solubility in water, 4: 320

Ammonium iodide

Ammine, decomposition pressure, 7: 241

Boiling point elevation in aqueous solution, 3: 325

Compressibility, aqueous solution, 3: 439

Decomposition pressure, 7: 240

Density, 1: 108

Aqueous solution, 3: 60, 107

Electrical conductivity, aqueous solution, 6: 235, 239

Free energy of allotropic transformation, 7: 241

Freezing point lowering of aqueous solution, 4: 255

Heat of formation, 5: 179

Heat of transition, 5: 179

Melting point under pressure, 4: 12

Refractive index, 1: 108, 165

Solubility in water, 4: 218

Specific heat, 5: 95

Aqueous solution, 5: 122

Sublimation temperature, 1: 108, 162

Surface tension, aqueous solution, 4: 464

Transference numbers, 6: 310

Transition temperature, 4: 7

Vapor pressure, 3: 207; 7: 241

Vapor pressure lowering in aqueous solution, 3: 293

Viscosity, aqueous solution, 5: 13

Volume change on melting, 4: 12

X-ray diffraction data, 1: 341

*-Ammonia***-Ethyl alcohol*

Boiling point elevation, 3: 336

Density, 3: 136

Viscosity, aqueous solution, 5: 24

-Formamide

Viscosity, 5: 27

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ammonium iodide.—(Continued)

- Hydriodic acid
 - Density, aqueous solution, **3**: 96
- Iodine
 - Freezing point lowering, **4**: 37
- Iodine-Nitrobenzene
 - Freezing point-solubility, **4**: 270
- Isoamyl alcohol
 - Density, **3**: 136
- Lead iodide
 - Freezing point-solubility in water, **4**: 319; **7**: 3178
- Methyl alcohol
 - Boiling point elevation, **3**: 333
- Sulfur dioxide
 - Boiling point elevation, **3**: 328
- Ammonium ion, free energy, **7**: 240
- Ammonium isobutyrate
 - Density, aqueous solution, **3**: 62
- Acetic acid*
 - Density, aqueous solution, **3**: 101
- Formic acid
 - Density, aqueous solution, **3**: 101
- Ammonium lactate
 - Density, aqueous solution, **3**: 62
- Dichloroacetic acid
 - Density, aqueous solution, **3**: 101
- Formic acid
 - Density, aqueous solution, **3**: 101
- Lactic acid
 - Density, aqueous solution, **3**: 101
- Ammonium lanthanum nitrate
 - Magnetic susceptibility, **6**: 359
- Ammonium lead chloride
 - Free energy, **7**: 250
 - Specific heat, **5**: 96
- Ammonium lead sulfate
 - Heat of formation, **5**: 183
- Ammonium lithium tartrate
 - Crystallography, **1**: 322
 - Refractive index, **1**: 149, 170
- Ammonium magnesium arsenate
 - Heat of formation, **5**: 195
- Ammonium magnesium chromate
 - Density, **1**: 142
 - Refractive index, **1**: 142, 171; **7**: 32
- Ammonium magnesium phosphate
 - Heat of formation, **5**: 195
- Ammonium magnesium selenate
 - Density, **1**: 141
 - Refractive index, **1**: 141, 169; **7**: 32
- Ammonium magnesium sulfate
 - Decomposition pressure of hydrates, **7**: 292
 - Dielectric constant, **6**: 99
 - Heat of formation, **5**: 195
 - Refractive index, **7**: 31
 - Solubility in water, **4**: 229
- Ammonium malate
 - Crystallography, **1**: 325
 - Density, aqueous solution, **3**: 62
- Formic acid
 - Density, aqueous solution, **3**: 101
- Malic acid
 - Density, aqueous solution, **3**: 101
- Ammonium malonate
 - Heat of solution in water, **5**: 148
- Ammonium manganese bromide
 - Heat of formation, **5**: 190
- Ammonium manganese chloride
 - Heat of formation, **5**: 190
- Ammonium manganese selenate
 - Refractive index, **7**: 31
- Ammonium manganous sulfate
 - Decomposition pressure of hydrate, **7**: 276
 - Density, **1**: 127
 - Dielectric constant, **6**: 99
 - Heat of formation, **5**: 190
 - Magnetic susceptibility, **6**: 357

Ammonium manganous sulfate.—(Continued)

- Refractive index, **1**: 127, 168; **7**: 31
- Solubility in water, **4**: 224
- Ammonium mercuric bromide
 - Heat of formation, **5**: 186
- Ammonium mercuric chloride
 - Thermal conductivity, **5**: 232
- Ammonium mercuric cyanide
 - Heat of formation, **5**: 187
- Ammonium metaborate
 - Heat of formation, **5**: 194
- Ammonium metaphosphate
 - Electrical conductivity, aqueous solution, **6**: 243
- Ammonium methanedisulfonate
 - Crystallography, **1**: 324
 - Density, aqueous solution, **3**: 63
- Ammonium molybdate
 - Dielectric constant, aqueous solution, **6**: 104
 - X-rays, absorption coefficient, **6**: 13
- Ammonium molybdomalate
 - Optical rotatory power, **7**: 353
- Ammonium neodymium nitrate
 - Magnetic susceptibility, **6**: 359
- Ammonium nickel selenate
 - Density, **1**: 132
 - Emission, spectral, **5**: 259
 - Reflectivity, selective, **5**: 260
 - Refractive index, **1**: 132, 170; **7**: 31
- Ammonium nickel sulfate
 - Density, **1**: 132
 - Aqueous solution, **3**: 69
 - Dielectric constant, **6**: 99
- Hydrate
 - Decomposition pressure, **7**: 285
 - Heat of decomposition, **7**: 285
 - Magnetic susceptibility, **6**: 358, 364
 - Refractive index, **1**: 132, 169; **7**: 31
 - Solubility in water, **4**: 226
 - Verdet constant, aqueous solution, **6**: 428
- Ammonium nitrate
 - Absorption spectra, solutions, **5**: 327, 328
 - Allotropic forms, **4**: 11
 - Ammines, decomposition pressure, **7**: 241
 - Boiling point elevation in aqueous solution, **3**: 325
 - Compressibility, aqueous solution, **3**: 439
 - Compressibility differences, **4**: 11
 - Density, aqueous solution, **3**: 59, 107
 - Saturated, **3**: 104
 - Detonation velocity, **7**: 492
 - Diffusion in water, **5**: 64
 - Electrical conductivity, **6**: 147
 - Aqueous solution, **6**: 231, 237, 240
 - Explosive, properties as, **7**: 490
 - Freezing mixtures, use in, **1**: 63
 - Freezing point lowering of aqueous solution, **4**: 255
 - Heat of dilution with water, **5**: 162
 - Heat of explosion, **7**: 489
 - Heat of formation, **5**: 179
 - Heat of transition, **5**: 179
 - Magnetic rotatory power, aqueous solution, **6**: 431
 - Melting point under pressure, **4**: 11, 18
 - Refractive index, **7**: 19
 - Aqueous solution, **7**: 66
 - Solubility in water, **4**: 217
 - Specific heat, **5**: 95
 - Aqueous solution, **5**: 122
 - Surface tension, aqueous solution, **4**: 464
 - Thermal expansion differences, **4**: 12
 - Transference number, **6**: 310
 - Transition temperature, **4**: 7
 - Triple points, **4**: 11

Ammonium nitrate.—(Continued)

- Vapor pressure, aqueous solution, **3**: 362
- Vapor pressure lowering in aqueous solution, **3**: 293
- Viscosity, aqueous solution, **5**: 13
- Volume change on melting, **4**: 11
- X-rays, absorption coefficient, **6**: 13
- Aluminum hydroxide* -Ammonium hydroxide
 - Aluminum hydroxide* -Ammonium hydroxide-Potassium nitrate
- Ammonia*
 - Ammonia* -Ammonium thiocyanate
 - Ammonia* -Sodium nitrate
 - Ammonium bicarbonate*
 - Ammonium bicarbonate* -Sodium bicarbonate
 - Ammonium chloride*
 - Ammonium chloride* -Lithium nitrate
 - Ammonium chloride* -Potassium chloride
 - Ammonium chloride* -Potassium nitrate
 - Ammonium chloride* -Sodium chloride
 - Ammonium chloride* -Sodium nitrate
 - Ammonium oxalate
 - Freezing point-solubility in water, **4**: 357
- Ammonium sulfate
 - Freezing point-solubility, **4**: 44
 - Freezing point-solubility in water, **4**: 322
- Ammonium sulfate-Potassium nitrate
 - Freezing point-solubility, **4**: 74
- Ammonium sulfate-Sodium nitrate
 - Freezing point-solubility, **4**: 73
- Barium nitrate
 - Density, aqueous solution, **3**: 97
 - Viscosity, aqueous solution, **5**: 18
- Calcium sulfate
 - Freezing point-solubility in water, **4**: 323; **7**: 340
- Cupric nitrate
 - Freezing point-solubility in water, **4**: 358
- Diethyl tartrate
 - Density, aqueous solution, **3**: 101
- Ethyl alcohol
 - Boiling point elevation, **3**: 336
 - Density, **3**: 136
- Ethyl alcohol-Methyl alcohol
 - Freezing point-solubility in water, **4**: 424
- Ethyl alcohol-Silver nitrate
 - Freezing point-solubility in water, **4**: 425
- Formamide
 - Density, **3**: 136
 - Viscosity, **5**: 27
- Lead nitrate
 - Freezing point-solubility, **4**: 44
 - Viscosity, aqueous solution, **5**: 18
- Lithium nitrate
 - Freezing point-solubility, **4**: 44
- Methyl alcohol
 - Boiling point elevation, **3**: 333
 - Density, **3**: 136
- Nitric acid
 - Density, aqueous solution, **3**: 96
 - Freezing point-solubility in water, **4**: 357
- Potassium chloride
 - Freezing point-solubility, **4**: 45
- Potassium chloride-Potassium nitrate
 - Freezing point-solubility, **4**: 74
- Potassium nitrate
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility, **4**: 45
 - Freezing point-solubility in water, **4**: 359
 - Viscosity, aqueous solution, **5**: 18
- Potassium nitrate-Potassium sulfate
 - Freezing point-solubility, **4**: 75

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ammonium nitrate.—(Continued)

- Potassium sulfate*
Freezing point-solubility, 4: 45
- Silver chloride*
Solubility in water, 7: 266
- Silver nitrate*
Freezing point-solubility, 4: 44
Freezing point-solubility in water, 4: 357; 7: 266
Surface tension, aqueous solution, 4: 470
- Sodium bicarbonate*
Density, aqueous solution, 3: 97
Freezing point-solubility in water, 4: 358
- Sodium bicarbonate-Sodium nitrate*
Density, aqueous solution, 3: 100
- Sodium chloride*
Freezing point-solubility, 4: 44
- Sodium chloride-Sodium nitrate*
Freezing point-solubility, 4: 74
- Sodium nitrate*
Density, aqueous solution, 3: 97
Freezing point-solubility, 4: 45
Freezing point-solubility in water, 4: 359
Vapor pressure, aqueous solution, 3: 377
Viscosity, aqueous solution, 5: 18
- Sodium nitrate-Sodium sulfate*
Freezing point-solubility, 4: 74
- Sulfuric acid*
Density, aqueous solution, 3: 96
Freezing point-solubility in water, 4: 322
- Thallium monochloride*
Solubility in water, 7: 319
- Thallous nitrate*
Freezing point-solubility, 4: 77
- Urea*
Eutectic point, 4: 207
- Ammonium nitrate-nitric acid**
Solubility in water, 4: 218
- Ammonium nitrite**
Electrical conductivity, aqueous solution, 6: 242
Heat of formation, 5: 179
- Ammonium oleate**
-*Ethyl alcohol*
Freezing point-solubility, 4: 111
Freezing point-solubility in water, 4: 406
- Ammonium oxalate**
Boiling point elevation in aqueous solution, 3: 327
Crystallography, 1: 324
Decomposition pressure of hydrates, 7: 246
Density, aqueous solution, 3: 62; 7: 67
Freezing point lowering of aqueous solution, 4: 255
Heat of formation, 5: 182
Optical rotatory power, 7: 354
Refractive index, 7: 29
Aqueous solution, 7: 67
Solubility in water, 4: 219
Surface tension, aqueous solution, 4: 467
- Ammonium chloride**
- Ammonium nitrate**
- Ammonium sulfate*
Freezing point-solubility in water, 4: 326
- Manganous oxalate*
Solubility in water, 7: 326
- Mercuric chloride*
Photochemical reaction, 7: 165
- Oxalic acid*
Freezing point-solubility in water, 4: 401
- Potassium oxalate*
Freezing point-solubility in water, 4: 366

Ammonium oxalate.—(Continued)

- Scandium oxalate*
Freezing point-solubility in water, 4: 367
- Sodium oxalate*
Freezing point-solubility in water, 4: 366
- Thallous oxalate*
Freezing point-solubility in water, 4: 366
- Thorium oxalate*
Solubility in water, 7: 319
- Uranyl oxalate*
Freezing point-solubility in water, 4: 367
- Ammonium palmitate**
-*Ethyl alcohol*
Freezing point-solubility, 4: 111
Freezing point-solubility in water, 4: 406
- Ammonium perchlorate**
Density, 1: 108
Aqueous solution, 3: 60
Saturated, 3: 104
Detonation velocity, 7: 492
Electrical conductivity, aqueous solution, 6: 242
Explosive, properties as, 7: 490
Heat of formation, 5: 179
Refractive index, 1: 108, 168; 7: 19
Transition temperature, 4: 7
Solubility in water, 4: 218
- Acetone**
- Ammonium sulfate*
Freezing point-solubility in water, 4: 315
- Butyl alcohol*
Density, 3: 136
- Ethyl acetate*
Density, 3: 136
- Ethyl alcohol*
Density, 3: 136
Freezing point-solubility in water, 4: 399
- Isobutyl alcohol*
Density, 3: 136
- Methyl alcohol*
Density, 3: 136
- Propyl alcohol*
Density, 3: 136
- Sodium perchlorate*
Freezing point-solubility in water, 4: 316
- Sodium sulfate*
Freezing point-solubility in water, 4: 315, 387
- Ammonium periodate**
Density, aqueous solution, 3: 104
Solubility in water, 4: 218
- Ammonium permanganate**
Density, aqueous solution, 3: 68
- Ammonium persulfate**
Density, 1: 109
Aqueous solution, 3: 61
Heat of formation, 5: 179
Melting point, 1: 109
Refractive index, 1: 109, 169
- Ammonium phosphate**
Density, aqueous solution, 3: 61
Electrical conductivity, aqueous solution, 6: 243
Heat of formation, 5: 180
Solubility in water, 4: 218
- Phosphoric acid*
Density, aqueous solution, 3: 97
- Ammonium phosphite**
Density, aqueous solution, 3: 61
- Ammonium picrate**
Crystallography, 1: 326
Heat of solution in water, 5: 149
Refractive index, 7: 29

Ammonium potassium chromate

- Heat of formation, 5: 206
- Ammonium propionate**
Density, aqueous solution, 3: 62, 107
- Formic acid*
Density, aqueous solution, 3: 101
- Propionic acid*
Density, aqueous solution, 3: 101
- Ammonium pyrosulfite**
Heat of formation, 5: 179
- Ammonium ruthenium sulfate**
Melting point, 1: 126
Refractive index, 1: 126, 165
- Ammonium salicylate**
Density, aqueous solution, 7: 69
Saturated, 3: 104
Refractive index, aqueous solution, 7: 69
Solubility in aqueous ethyl alcohol, 4: 405
Surface tension, aqueous solution, 4: 469
- Ethyl alcohol*
Density, 3: 160
Aqueous solution, 3: 101; 4: 405
- Potassium formate*
Surface tension, aqueous solution, 4: 470
- Ammonium selenate**
Density, 1: 109
Refractive index, 1: 109, 170; 7: 19
- Selenic acid*
Density, aqueous solution, 3: 96
- Ammonium selenides**
Heat of formation, 5: 179
- Ammonium selenite**
Density, aqueous solution, 3: 61
- Ammonium shikimate**
Refractive index, 7: 30
- Ammonium silicofluoride**
Density, aqueous solution, 3: 104
Vapor pressure lowering in aqueous solution, 3: 293
- Ammonium silver chloride**
Activity coefficient in water, 7: 270
- Ammonium silver nitrate**
Solubility in water, 4: 223
- Ammonium sodium hydrogen arsenate**
Density, 1: 151
Refractive index, 1: 151, 168
- Ammonium sodium hydrogen phosphate**
Electrical conductivity, aqueous solution, 6: 248
Freezing point lowering of aqueous solution, 4: 259
Heat of formation, 5: 202
- Ammonium sodium sulfate**
Density, aqueous solution, 3: 105
Heat of formation, 5: 201
Solubility in water, 4: 237
- Ammonium sodium tartrate**
Crystallography, 1: 323
Density, 1: 152
Optical rotatory power, 7: 353
Refractive index, 1: 152, 169, 174; 7: 26
- Ammonium stearate**
Decomposition pressure, 7: 246
- Ethyl alcohol*
Freezing point-solubility, 4: 111
Freezing point-solubility in water, 4: 406
- Ammonium strontium sulfate**
Heat of formation, 5: 198
- Ammonium succinate**
Density, aqueous solution, 3: 62; 7: 68
Heat of solution in water, 5: 149
Refractive index, aqueous solution, 7: 68
- Formic acid*
Density, aqueous solution, 3: 101
- Succinic acid*
Density, aqueous solution, 3: 101
- Ammonium sulfantimonate**
Solubility in water, 4: 218

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ammonium sulfate

- Absorption spectra, solutions, **5**: 327
 Boiling point elevation in aqueous solution, **3**: 325
 Compressibility, aqueous solution, **3**: 439
 Density, **1**: 109
 Aqueous solution, **3**: 60, 107; **7**: 66
 Saturated, **3**: 104
 Solid, **3**: 44
 Dielectric constant, **6**: 76
 Diffusion in water, **5**: 65
 Electrical conductivity, aqueous solution, **6**: 231, 235, 240
 Freezing point lowering of aqueous solution, **4**: 255
 Heat of formation, **5**: 179
 Melting point, **1**: 109
 Osmotic pressure, **4**: 431
 Refractive index, **1**: 109, 169; **7**: 19
 Aqueous solution, **7**: 66
 Solubility in aqueous ethyl alcohol, **3**: 403
 Solubility in water, **4**: 218
 Specific heat, **5**: 95
 Aqueous solution, **5**: 122
 Surface tension, aqueous solution, **4**: 464
 Vapor pressure, aqueous solution, **3**: 363
 Vapor pressure lowering in aqueous solution, **3**: 293
 Viscosity, aqueous solution, **5**: 13
 X-ray diffraction data, **1**: 341
 -Acetone*
 -Aluminum sulfate*
 -Ammonium bicarbonate*
 -Ammonium chloride*
 -Ammonium chromate*
 -Ammonium hydroxide*
 -Ammonium nitrate*
 -Ammonium nitrate*-Potassium nitrate
 -Ammonium nitrate*-Sodium nitrate
 -Ammonium oxalate*
 -Ammonium perchlorate*
 -Ammonium tetraborate
 Freezing point-solubility in water, **4**: 329
 -Beryllium sulfate
 Freezing point-solubility in water, **4**: 329, 388
 -Calcium acetate
 Freezing point-solubility in water, **4**: 327
 -Calcium chloride
 Freezing point-solubility in water, **4**: 275
 -Calcium nitrate
 Freezing point-solubility in water, **4**: 323
 -Calcium sulfate
 Density, aqueous solution, **3**: 97
 Freezing point-solubility in water, **4**: 332, 388; **7**: 341
 -Cerous sulfate
 Freezing point-solubility in water, **4**: 331
 -Cupric chloride
 Freezing point-solubility in water, **4**: 276, 382
 -Cupric sulfate
 Density, aqueous solution, **3**: 97
 Freezing point-solubility in water, **4**: 327
 Viscosity, aqueous solution, **5**: 18
 -Cupric sulfate-Lithium sulfate
 Freezing point-solubility in water, **4**: 328, 388
 -Cupric sulfate-Nickel sulfate
 Freezing point-solubility in water, **4**: 327
 -Cupric sulfate-Potassium sulfate
 Freezing point-solubility in water, **4**: 328, 388

Ammonium sulfate.—(Continued)

- Cupric sulfate-Zinc sulfate
 Freezing point-solubility in water, **4**: 327
 -Diethyl tartrate
 Density, aqueous solution, **3**: 101
 -Ethyl alcohol
 Density, aqueous solution, **3**: 101
 -Ethyl alcohol-Lithium sulfate
 Freezing point-solubility in water, **4**: 425
 -Ferrous sulfate
 Density, aqueous solution, **3**: 97
 Freezing point-solubility in water, **4**: 328, 388
 -Ferrous sulfate-Lithium sulfate
 Freezing point-solubility in water, **4**: 328, 388
 -Ferrous sulfate-Magnesium sulfate
 Freezing point-solubility in water, **4**: 328
 -Hydrochloric acid
 Density, aqueous solution, **3**: 95
 -Lanthanum sulfate
 Freezing point-solubility in water, **4**: 331
 -Lead acetate
 Freezing point-solubility in water, **4**: 327
 -Lithium carbonate
 Solubility in water, **7**: 345
 -Lithium sulfate
 Freezing point-solubility in water, **4**: 332, 388
 -Magnesium sulfate
 Density, aqueous solution, **3**: 97
 Freezing point-solubility in water, **4**: 329, 388
 -Magnesium sulfate-Potassium sulfate
 Freezing point-solubility in water, **4**: 331, 388
 -Manganous sulfate
 Density, aqueous solution, **3**: 97
 Viscosity, aqueous solution, **5**: 18
 -Nitric acid
 Density, aqueous solution, **3**: 96
 -Potassium chloride-Sodium nitrate
 Density, aqueous solution, **3**: 100
 -Potassium chromate
 Freezing point-solubility in water, **4**: 329
 -Potassium sulfate
 Boiling point elevation in aqueous solution, **3**: 347
 Density, **3**: 133
 Aqueous solution, **3**: 97
 Freezing point-solubility in water, **4**: 332, 389
 Refractive index, aqueous solution, **7**: 92
 Viscosity, aqueous solution, **5**: 18
 -Samarium sulfate
 Freezing point-solubility in water, **4**: 331
 -Silver sulfate
 Solubility in water, **7**: 325
 -Sodium bicarbonate
 Freezing point-solubility in water, **4**: 326
 -Sodium carbonate
 Density, aqueous solution, **3**: 97
 -Sodium chlorate
 Freezing point-solubility in water, **4**: 315, 387
 -Sodium chloride
 Freezing point-solubility in water, **4**: 276, 382
 -Sodium sulfate
 Freezing point-solubility in water, **4**: 333, 389

Ammonium sulfate.—(Continued)

- Sodium tetraborate
 Density, aqueous solution, **3**: 97
 Freezing point-solubility in water, **4**: 330, 388
 -Strontium acetate
 Freezing point-solubility in water, **4**: 327
 -Sulfuric acid
 Density, aqueous solution, **3**: 96
 Freezing point-solubility, **4**: 42
 -Thallous sulfate
 Freezing point-solubility in water, **4**: 327
 -Zirconyl sulfate
 Density, **3**: 133
Ammonium sulfides
 Heat of formation, **5**: 179
Ammonium sulfite
 Heat of formation, **5**: 179
Ammonium tartrate
 Crystallography, **1**: 325
 Density, aqueous solution, **3**: 62; **7**: 68
 Heat of formation, **5**: 182
 Optical rotatory power, **7**: 354
 Pyroelectric constant, **6**: 209, 212
 Refractive index, aqueous solution, **7**: 68
 -Sodium tartrate
 Freezing point-solubility in water, **4**: 366
 -Yttrium tartrate
 Solubility in water, **7**: 338
Ammonium tetraborate
 Solubility in water, **4**: 226
 -Ammonium chloride*
 -Ammonium sulfate*
 -Sodium chloride
 Freezing point-solubility in water, **4**: 297, 385
 -Sodium sulfate
 Freezing point-solubility in water, **4**: 330, 388
 -Sodium tetraborate
 Freezing point-solubility in water, **4**: 368, 392
Ammonium thiocyanate
 Absorption spectra, **5**: 335
 Compressibility difference on transition line, **4**: 14
 Density, aqueous solution, **3**: 63; **7**: 66
 Electrical conductivity, aqueous solution, **6**: 243, 254
 Freezing mixtures, use in, **1**: 63
 Freezing point lowering of aqueous solution, **4**: 255
 Heat of formation, **5**: 182
 Melting point under pressure, **4**: 14
 Refractive index, aqueous solution, **7**: 66
 Solubility in water, **4**: 219
 Tautomerism, kinetics of, **7**: 120
 Thiourea transformation, **7**: 245
 Transition temperature, **4**: 7
 Vapor pressure lowering in aqueous solution, **3**: 293
 Volume change on melting, **4**: 14
 -Acetone*
 -Ammonia*
 -Ammonia*-Ammonium nitrate
 -Ethyl alcohol
 Boiling point elevation, **3**: 336
 -Methyl alcohol
 Boiling point elevation, **3**: 333
 -Sulfur dioxide
 Boiling point elevation, **3**: 328
 -Thiourea
 Density, **3**: 150
 Freezing point-solubility, **4**: 48, 213, 401
Ammonium thorium chloride
 Heat of formation, **5**: 184

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ammonium tribromideDecomposition pressure, **7**: 240**Ammonium trichloroacetate**Density, aqueous solution, **3**: 63Specific heat, aqueous solution, **5**: 124**-Chloroacetic acid**Density, aqueous solution, **3**: 101**-Trichloroacetic acid**Density, aqueous solution, **3**: 101**Ammonium uranyl acetate**Crystallography, **1**: 321Heat of formation, **5**: 193Refractive index, **1**: 134, 166; **7**: 22**Ammonium uranyl sulfate**Photoluminescence, **5**: 387**Ammonium valerate**Density, aqueous solution, **7**: 69Refractive index, aqueous solution, **7**: 69**Ammonium vanadate**Density, aqueous solution, **3**: 70Magnetic susceptibility, **6**: 359**Ammonium vanadous sulfate**Decomposition pressure of hydrate, **7**: 288Solubility in water, **4**: 226**Ammonium zinc selenate**Refractive index, **7**: 31**Ammonium zinc sulfate**Density, **1**: 119Dielectric constant, **6**: 99Heat of formation, **5**: 185**Hydrate**Decomposition pressure, **7**: 255Heat of decomposition, **7**: 255Refractive index, **1**: 119, 169; **7**: 31Solubility in water, **4**: 221**Ampco (bronze), **2**: 371; cf. 578, 601****Ampere, definition, **1**: 34**International, **1**: 18**Ampere-turn, definition, **1**: 34****Amphibolite,**Hardness, **2**: 50Impact hardness, **2**: 51Thermal conductivity, **2**: 55**Amygdalin**Heat of combustion, **5**: 168Optical rotatory power, **7**: 399Osmotic pressure, **4**: 430**Amyl acetate**Absorption spectra, **5**: 333, 342Birefringence, electric, **7**: 111Dielectric constant, **6**: 92Electrical conductivity, **6**: 145Heat of combustion, **5**: 167Thermal conductivity, **5**: 228Viscosity, **5**: 39; **7**: 219**-Acetanilide*****-Acetone*****-Azobenzene**Heat of solution, **5**: 154**-Benzoic acid**Density, **3**: 186**-Caffeine**Density, **3**: 189**-Citric acid**Density, **3**: 185**-Diphenylamine**Heat of solution, **5**: 154**-Ethyl acetate**Heat of solution, **5**: 157, 158Surface tension, **4**: 473Vapor pressure, **3**: 289**-Gallic acid**Density, **3**: 189**-Hydrogen peroxide**Distribution coefficients in water, **3**: 419**-Nitrocellulose**Density, **3**: 196**Amyl acetate.—(Continued)****-Nitronaphthalene**Heat of solution, **5**: 154**-Phenacetine**Density, **3**: 189**-Phenyl salicylate**Density, **3**: 189**-Pyrogallol**Heat of solution, **5**: 154**-Saccharin**Distribution coefficients in hydrochloric acid, **3**: 429**-Salicylic acid**Density, **3**: 187**-Stearic acid**Density, **3**: 189**-Xylene**Density, **3**: 189**Amyl alcohol**Absorption spectra, **5**: 332, 338; **6**: 98Azeotropic mixtures, **3**: 321Birefringence, electric, **7**: 111Boiling point, **3**: 220Compressibility, **3**: 42Condensation on ions and nuclei, **6**: 117Dielectric absorption, **6**: 98Dielectric constant, **6**: 105Dielectric dispersion, **6**: 98Diffusion of vapor in gases, **5**: 62Faraday effect, lag in, **6**: 434Heat of combustion, **5**: 164Heat of vaporization, **5**: 137Heat of wetting by, **5**: 142Ignition temperature, **2**: 174Magnetic susceptibility, **6**: 362Optical rotatory power of derivatives, **7**: 402Polarization of light reflected from, **5**: 261Polarization of light scattered by, **5**: 267Refraction, index of, **6**: 98; **7**: 38

Sound, velocity of

Gas, **6**: 463Liquid, **6**: 464Surface tension, **4**: 436Thermal conductivity, **5**: 228Vapor pressure, **3**: 220Viscosity, **7**: 216, 223**-Acetic acid*****-Acetone*****-Air*****-Ammonia*****-Arsenous oxide**Distribution coefficients in water, **3**: 421**-Benzene**Compressibility, **3**: 440Density, **3**: 173Dielectric constant, **6**: 103, 106**-Boric acid**Density, aqueous solution, **3**: 102Distribution coefficients in water, **3**: 422**-Boric acid-Sodium chloride**Density, aqueous solution, **3**: 103**-Cadmium chloride**Distribution coefficients in water, **3**: 421**-Cadmium iodide**Distribution coefficients in water, **3**: 421**-Chloroform**Density, **3**: 147**-Cobaltous chloride**Magnetic susceptibility, **6**: 364**-Diethylamine**Distribution coefficients in water, **3**: 427**-Ethane**Vapor pressure, **3**: 360**Amyl alcohol.—(Continued)****-Ethyl alcohol**Density, **3**: 159Aqueous solution, **3**: 127**-Ethyl alcohol-Sodium chloride**Freezing point-solubility in water, **4**: 426**-Ethylxanthic acid**Distribution coefficients in water, **3**: 428**-Formaldehyde**Distribution coefficients in water, **3**: 422**-Hydrogen peroxide**Distribution coefficients in water, **3**: 419**-Iodine**Distribution coefficients in water, **3**: 420**-Lithium chloride**Density, **3**: 140Distribution coefficients in water, **3**: 422**-Mercuric chloride**Verdet constant, **6**: 427**-Methyl alcohol**Density, **3**: 151**-Methylamine**Distribution coefficients in water, **3**: 423**-Oxalic acid**Distribution coefficients in water, **3**: 423**-Phenol**Distribution coefficients in water, **3**: 428**-Picric acid**Distribution coefficients in water, **3**: 427**-Sodium chloride**Density, aqueous solution, **3**: 102**-Succinic acid**Distribution coefficients in water, **3**: 426**-Sulfur**Freezing point-solubility, **4**: 35**-Sulfuric acid**Distribution coefficients in water, **3**: 420**-Tetraethylammonium iodide**Density, **3**: 173**-Triethylamine**Distribution coefficients in water, **3**: 429**-Urethan**Freezing point-solubility, **4**: 174**-m-Xylene**Dielectric constant, **6**: 103**-p-Xylene**Heat of solution, **5**: 158**act.-Amyl alcohol**Specific heat, **5**: 109Verdet constant, **6**: 429Dispersion of, **6**: 434Viscosity, **7**: 216**sec.-Amyl alcohol**Density, aqueous solution, **3**: 114Verdet constant, dispersion of, **6**: 434Viscosity, **7**: 217**tert.-Amyl alcohol**Absorption spectra, **5**: 332, 338Azeotropic mixtures, **3**: 318-321Birefringence, electric, **7**: 111Boiling point, **3**: 343Critical temperature, **3**: 248Heat of fusion, **5**: 132Heat of vaporization, **5**: 137Magnetic susceptibility, **6**: 362Specific heat, **5**: 109Surface tension, **4**: 453Aqueous solution, **4**: 469

tert.-Amyl alcohol.—(Continued)

- Verdet constant, dispersion of, **6**: 434
 Viscosity, **5**: 35; **7**: 217
 -Benzil
 Boiling point elevation, **3**: 343
 -Chloral
 Viscosity, **5**: 35
 -Diethylammonium chloride
 Boiling point elevation, **3**: 343
Amyl benzoate
 Birefringence, magnetic, **7**: 112
 Dielectric absorption, **6**: 96
 Dielectric constant, **6**: 96
 Electrical conductivity, **6**: 144
 Refractive index, **7**: 57
 Thermal conductivity, **5**: 228
 -Benzene
 Density, **3**: 181
 -1,4-Dichloronaphthalene
 Density, **7**: 89
 Refractive index, **7**: 89
 Dispersion, **7**: 108
 -Ethyl alcohol-Water
 Vapor pressure, partial, **3**: 291
 -Naphthalene
 Density, **7**: 89
 Refractive index, **7**: 89
 -m-Xylene
 Density, **3**: 191
Amyl bromide
 Absorption spectra, **5**: 332
 Dielectric constant, **6**: 89
 Heat of vaporization, **5**: 137
 Refractive index, **7**: 38
 Thermal conductivity, **5**: 228
d-Amyl bromide
 Optical rotatory power, **7**: 401
l-Amyl bromide
 -Camphoroxime
 Density, **3**: 172
tert.-Amyl bromide
 Dielectric constant, **6**: 89
Amyl α -bromobutyrate
 Surface tension, **4**: 459
Amyl butyrate
 Compressibility, **3**: 37
 Diffusion of vapor in air, **5**: 63
 Electrical conductivity, **6**: 145
 Thermal conductivity, **5**: 228
act.-Amyl butyrate
 Surface tension, **4**: 459
Amyl camphocarboxylate
 -Ethyl ether
 Boiling point elevation, **3**: 341
Amyl chloride
 Absorption spectra, **5**: 332
 Dielectric constant, **6**: 89
 Refractive index, **7**: 38
 Thermal conductivity, **5**: 228
 -m-Xylene
 Dielectric constant, **6**: 102
tert.-Amyl chloride
 Birefringence, electric, **7**: 111
 Dielectric constant, **6**: 89
 Refractive index, **7**: 38
 Verdet constant, **6**: 429
Amyl cyanoacetate
 Surface tension, **4**: 458
 β -Amyl esters
 Optical rotatory power, **7**: 361
Amyl ether
 Absorption spectra, **5**: 332
 Dielectric constant, **6**: 95
 Heat of vaporization, **5**: 138
 Viscosity, **7**: 223
 -Benzoic acid
 Distribution coefficients in water, **3**: 429
 -Succinic acid
 Distribution coefficients in water, **3**: 426

Amyl formate

- Absorption spectra, **5**: 332
 Dielectric constant, **6**: 91
 Diffusion of vapor in air, **5**: 62
 Electrical conductivity, **6**: 145
 Refractive index, **7**: 40
 Surface tension, **4**: 455
 Vapor pressure, **3**: 222
 -Benzene
 Density, **3**: 179
 -Ethyl acetate
 Heat of solution, **5**: 157
 Propyl acetate
 Density, **3**: 172
 Heat of solution, **5**: 157
 Surface tension, **4**: 473
 -Xylene
 Density, **3**: 185
Amyl hydrocinnamate
 Surface tension, **4**: 461
 -Methyl propionate
 Surface tension, **4**: 473
Amyl iodide
 Absorption spectra, **5**: 332
 Electrical conductivity, **6**: 144
 Heat of vaporization, **5**: 137
 Refractive index, **7**: 82
 Thermal conductivity, **5**: 228
 -Propyl alcohol
 Refractive index, **7**: 82
d-Amyl iodide
 Optical rotatory power, **7**: 401
tert.-Amyl iodide
 Dielectric constant, **6**: 89
Amyl isobutyrate
 Diffusion of vapor in gases, **5**: 63
Amyl nitrate
 Dielectric constant, **6**: 89
 Electrical conductivity, **6**: 144
 Magnetic susceptibility, **6**: 362
Amyl nitrite
 Absorption spectra, **5**: 332
 Electrical conductivity, **6**: 144
Amyl propionate
 Diffusion of vapor in gases, **5**: 63
 Electrical conductivity, **6**: 145
act.-Amyl stearate
 Surface tension, **4**: 463
Amyl thiocyanate
 Dielectric constant, **6**: 91
 Electrical conductivity, **6**: 144
Amyl trichloroacetate
 - β -Amylene
 Boiling point elevation, **3**: 343
 -Ethyl ether
 Boiling point elevation, **3**: 341
act.-Amyl trichloroacetate
 Surface tension, **4**: 457
Amyl valerate
 Absorption spectra, **5**: 333
 Compressibility, **3**: 37
 Electrical conductivity, **6**: 145
 Thermal conductivity, **5**: 228
 -Benzene
 Density, **3**: 180
 -m-Xylene
 Density, **3**: 191
Amylamine
 Density, aqueous solution, **3**: 114
 Dielectric constant, **6**: 89
 Heat of solution in water, **5**: 149
 Heat of vaporization, **5**: 137
 Surface tension, **4**: 453
 Thermal conductivity, gas, **5**: 214
 -Chloroform
 Distribution coefficients in water, **3**: 427
 -Xylene
 Distribution coefficients in water, **3**: 427

d-Amylamine

- Optical rotatory power, **7**: 402
tert.-Amylamine
 Surface tension, **4**: 453
Amylamine hydrochloride
 Density, aqueous solution, **3**: 114
 Heat of solution in water, **5**: 149
 -Chloroform
 Boiling point elevation, **3**: 331
Amylase, **7**: 154
Amylbenzene
 -Antimony tribromide
 Freezing point-solubility, **4**: 197
 -Antimony trichloride
 Freezing point-solubility, **4**: 193
Amylene
 Absorption spectra, **5**: 338
 Birefringence, electric, **7**: 111
 Dielectric constant, **6**: 88
 Electrical conductivity, **6**: 144
 X-rays, effect of, **6**: 6
 Heat of combustion, **5**: 163
 Heat of vaporization, **5**: 137
 Heat of wetting by, **5**: 142
 Refractive index
 Gas, **7**: 10
 Liquid, **7**: 37
 Specific heat
 Gas, **5**: 81
 Liquid, **5**: 109
 -Aniline
 Density, **3**: 172
 Solubility, mutual, **3**: 396, 397
 -Benzene
 Density, **3**: 172
 -Carbon disulfide
 Density, **3**: 145
 -Chloroform
 Density, **3**: 147
 Dielectric constant, **6**: 102
 -Dichloroacetic acid
 Reaction kinetics, **7**: 124
 -Ethyl alcohol
 Density, **3**: 159
 -Ethyl ether
 Density, **3**: 168
 -Ethylene bromide
 Density, **3**: 155
 Dielectric constant, **6**: 102
 -Trichloroacetic acid
 Distribution coefficients in water, **3**: 423
 Reaction kinetics, **7**: 124
 -Trichlorobutyric acid
 Distribution coefficients in water, **3**: 426
 β -Amylene
 Boiling point, **3**: 342
 Dielectric constant, **6**: 82
 -Amyl trichloroacetate*
 -Benzoic acid
 Boiling point elevation, **3**: 343
 -Dichloroacetic acid
 Boiling point elevation, **3**: 343
 -Naphthalene
 Boiling point elevation, **3**: 343
 -Trichloroacetic acid
 Boiling point elevation, **3**: 343
Amylene bromide
 Dielectric constant, **6**: 88
 Magnetic susceptibility, **6**: 362
 Refractive index, **7**: 37
Amylene chloride
 Magnetic susceptibility, **6**: 362
Amylidene chloride
 Magnetic susceptibility, **6**: 362
Amylisopropylcarbinol, viscosity, **7**: 220
Amylmercaptan
 Dielectric constant, **6**: 89
 Electrical conductivity, **6**: 144

* Data for system will be found under this compound in Index. Full explanation on page vii.

Amylphenylpropargyl alcohol
Heat of combustion, **5**: 164

Amylpropargyl alcohol
Heat of combustion, **5**: 164

Amylpropiolamide
Verdet constant, **6**: 429

Amylpropionic acid
Heat of combustion, **5**: 165

Amyltriethyllead
Boiling point, **1**: 116, 163
Density, **1**: 116
Refractive index, **1**: 116, 165

Amyrilene
Crystallography, **1**: 337
Optical rotatory power, **7**: 462

Amyrin, optical rotatory power, **7**: 464

Amyrolin, refractive index, **7**: 30

Anaconda bronze, **2**: 371; *cf.* 559, 601

Analcite
Density, **1**: 153
Dielectric constant, **6**: 99
Refractive index, **1**: 153, 166

Anam, weights and measures, **1**: 2

Anapaite
Density, **1**: 145
Refractive index, **1**: 145, 171

Anatase
Density, **1**: 113
Heat of transition, **5**: 182
Refractive index, **1**: 113, 168; **7**: 19
Thermal expansion, **3**: 43
X-ray diffraction data, **1**: 341
See also Titanium dioxide.

Anatomical alloy, **2**: 371

Ancylite
Density, **1**: 147
Refractive index, **1**: 147, 173

Andalusite
Density, **1**: 137
Heat of formation, **5**: 194
Refractive index, **1**: 137, 171; **7**: 22
Specific heat, **5**: 101

Andesine, specific heat, **2**: 101; **5**: 100

Andesite
Bulk density, **2**: 53
Hardness, **2**: 50
Impact hardness, **2**: 51
Thermal conductivity, **2**: 55
Thermal diffusivity, **2**: 56

Andradite, thermal expansion, **3**: 45

Andrographolic acid
Optical rotatory power, **7**: 466

Anemometers, **1**: 403

Aneroids, graduation of, **1**: 72

Anethole
Absorption spectra, **5**: 333, 346
Birefringence, magnetic, **7**: 111, 113
Cryoscopic constant, **4**: 184
Heat of fusion, **5**: 134
Heat of vaporization, **5**: 138
Magnetic susceptibility, **6**: 363
Melting point under pressure, **4**: 10
Melting pressure, **4**: 16
Refractive index, **7**: 50
Specific heat, **5**: 112
Surface tension, **4**: 460
Verdet constant, **6**: 430
Viscosity, **5**: 51
-Acetone*
-Benzene
Boiling point elevation, **3**: 345
Density, **3**: 180
-Carbon disulfide
Density, **3**: 146
-Chloroform
Viscosity, **5**: 33
-Cinnamaldehyde
Density, **3**: 193
-Cyclohexane
Boiling point elevation, **3**: 346

Anethole.—(Continued)
-Ethyl alcohol
Viscosity, **5**: 38
-L-Menthol
Density, **3**: 194
Freezing point-solubility, **4**: 158
Viscosity, **5**: 51
-Phenyl thiocyanate
Density, **3**: 186
-Toluene
Boiling point elevation, **3**: 346

Angelic acid
Electrical conductivity, aqueous solution, **6**: 269
Heat of combustion, **5**: 165
Refractive index, **7**: 37

Angle
Conversion factors, **1**: 21
Solid, conversion factors, **1**: 21

Angle of contact, **4**: 434

Anglesite
Compressibility, **3**: 50
Density, **1**: 115
Melting point, **1**: 115
Refractive index, **1**: 115, 173
Thermal conductivity, **5**: 232
See also Lead sulfate.

Angstrom unit, definition, **1**: 34

Anhydrite. *See* Calcium sulfate.

Anhyseretic, definition, **6**: 369

Anilide formation, kinetics of, **7**: 141

Aniline
Absorption spectra, **5**: 332, 339, 361, 362, 371, 375
Azeotropic mixtures, **3**: 322
Birefringence, **7**: 111
Boiling point, **3**: 221, 345
Compressibility, **3**: 36, 39
Critical point data, **3**: 249
Cryoscopic constant, **4**: 183
Density, **3**: 29, 33
Aqueous solution, **3**: 114
Dielectric constant, **6**: 82, 90, 105
Diffusion in methyl alcohol, **5**: 73
Diffusion of vapor in air, **5**: 62
Electrical conductivity, **6**: 144
Aqueous solution, **6**: 274
Flash point, **2**: 162
Freezing point lowering of aqueous solution, **4**: 263
Heat of combustion, **5**: 168
Heat of fusion, **5**: 133
Heat of solution in water, **5**: 149
Heat of vaporization, **5**: 137
Heat of wetting by, **5**: 142
Ignition temperature, **2**: 174
Magnetic susceptibility, **6**: 362
Melting point under pressure, **4**: 15
Photoelectric threshold, **6**: 68
Photoluminescence, **5**: 386
Polarization of light scattered by, **5**: 267
Refractive index, **7**: 12, 38
Aqueous solution, **7**: 69
Rubber vulcanization, use in, **2**: 279
Solubility in water, **3**: 389; **4**: 252
Pressure, effect of, **3**: 393
Sound, velocity of, in, **6**: 464
Specific heat
Aqueous solution, **5**: 115
Liquid, **5**: 110, 115
Solid, **5**: 103
Surface tension, **4**: 436, 454
Aqueous solution, **4**: 469
Thermal conductivity, **5**: 228
Solid, **5**: 216
Toxicology, **2**: 318
Vapor pressure, **3**: 221
Aqueous solution, **3**: 365
Verdet constant, **6**: 429
Viscosity, **5**: 28, 39, 40, 42, 43, 45–47; **7**: 217, 223

Aniline.—(Continued)
Volume change on melting, **4**: 15
-Acenaphthene*
-Acetanilide*
-Acetic acid*
-Acetone*
-Allyl isothiocyanate*
-Allyl thiocyanate*
-Allyl thiocyanate*-Toluene
-m-Aminophenol*
-p-Aminophenol*
-Aminoazobenzene*
-Ammonia*
-Amylene*
-Aniline hydrochloride
Density, aqueous solution, **3**: 129
Distribution coefficients in water, **3**: 428
Miscibility in water, **3**: 416
Viscosity, **5**: 48
-Aniline hydroiodide
Density, **3**: 184
-Anthracene
Freezing point-solubility, **4**: 142
-Anthraquinone
Boiling point elevation, **3**: 345
Freezing point-solubility, **4**: 178
-Antimony trichloride
Density, **3**: 137
Freezing point-solubility, **4**: 191
Viscosity, **5**: 28
-Benzanilide
Boiling point elevation, **3**: 345
-Benzene
Birefringence, electric, **7**: 112
Boiling point elevation, **3**: 344
Compressibility, **3**: 440
Density, **3**: 179
Distribution coefficients in water, **3**: 428
Freezing point-solubility, **4**: 132
Heat of solution, **5**: 154
Magnetic rotatory power, **6**: 432
Refractive index, **7**: 84
Surface tension, **4**: 473
Vapor pressure, **3**: 289
-Benzene-m-Cresol
Viscosity, **5**: 51
-Benzil
Boiling point elevation, **3**: 345
-Benzoic acid
Density, **3**: 184
Freezing point-solubility, **4**: 141
-ω-Bromoacetophenone
Reaction kinetics, **7**: 125
-Butane
Solubility, mutual, **3**: 397
-Butyric acid
Density, aqueous solution, **3**: 129
-Cadmium iodide
Freezing point-solubility, **4**: 198
-Caffeine
Density, **3**: 185
-Carbazole
Freezing point-solubility, **4**: 142
-Carbon dioxide
Vapor pressure, **3**: 359
-Carbon disulfide
Density, **3**: 145
-Carbon tetrachloride
Density, **3**: 144
Distribution coefficients in water, **3**: 428
Heat of solution, **5**: 151, 155
Specific heat, **5**: 125
-Catechol
Freezing point-solubility, **4**: 137
-Chloroform
Freezing point-solubility, **4**: 172
Heat of solution, **5**: 151
Vapor pressure, **3**: 287

* Data for system will be found under this compound in Index. Full explanation on page vii.

Aniline.—(Continued)

- Chloronitrobenzene (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 123
- o*-Chlorophenol
 - Density, **3**: 175
 - Freezing point-solubility, **4**: 128
 - Viscosity, **5**: 43
- m*-Chlorophenol
 - Density, **3**: 176
 - Viscosity, **5**: 44
- p*-Chlorophenol
 - Density, **3**: 176
 - Viscosity, **5**: 44
- o*-Cresol
 - Freezing point-solubility, **4**: 141
- m*-Cresol
 - Density, **3**: 184
 - Freezing point-solubility, **4**: 142
 - Viscosity, **5**: 48
- p*-Cresol
 - Density, **3**: 185
 - Freezing point-solubility, **4**: 142
 - Viscosity, **5**: 49
- Crotononitrile
 - Freezing point-solubility, **4**: 113
- Cyclohexane
 - Boiling point, **3**: 314
 - Solubility, mutual, **3**: 397
 - Vapor pressure, **3**: 361
 - Viscosity, **5**: 48
- Cyclopentane
 - Solubility, mutual, **3**: 397
- Decacyclene
 - Boiling point elevation, **3**: 345
- p*-Dibromobenzene
 - Freezing point-solubility, **4**: 175
- Diethyl tartrate
 - Density, **3**: 185
- Diisamyl
 - Solubility, mutual, **3**: 397
- Dimethylaniline
 - Density, **3**: 185
 - Surface tension, **4**: 474
- Dimethylcyclohexane
 - Solubility, mutual, **3**: 397
- Dimethylcyclopentane
 - Solubility, mutual, **3**: 397
- Dinaphthalenethiophene
 - Boiling point elevation, **3**: 345
- Dinitrobenzene (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 124
- 2, 4-Dinitrophenol
 - Freezing point-solubility, **4**: 126
- 2, 4-Dinitrotoluene
 - Freezing point-solubility, **4**: 141
- 2, 6-Dinitrotoluene
 - Freezing point-solubility, **4**: 141
- 3, 5-Dinitrotoluene
 - Freezing point-solubility, **4**: 141
- 3, 4-Dinitrotoluene
 - Freezing point-solubility, **4**: 141
- Diphenylamine
 - Boiling point elevation, **3**: 345
 - Density, **3**: 185
- Ethyl acetate
 - Density, **3**: 166
 - Freezing point-solubility, **4**: 115
 - Heat of solution, **5**: 153
 - Viscosity, **5**: 40
- Ethyl alcohol
 - Boiling point elevation, **3**: 336
 - Density, **3**: 160
 - Aqueous solution, **3**: 127
 - Heat of solution, **5**: 152
 - Magnetic rotatory power, **6**: 432
 - Refractive index, **7**: 81
 - Specific heat, **5**: 116
 - Surface tension, aqueous solution, **4**: 470
 - Viscosity, aqueous solution, **5**: 21
- Ethyl ether
 - Boiling point elevation, **3**: 341
 - Density, **3**: 168

Aniline-Ethyl ether.—(Continued)

- Distribution coefficients in water, **3**: 428
- Heat of solution, **5**: 157
- Specific heat, **5**: 127
- Vapor pressure lowering, **3**: 300
- Fluorene
 - Freezing point-solubility, **4**: 178
- Formic acid
 - Density, aqueous solution, **3**: 125
- Glycerol
 - Specific heat, **5**: 116, 127
- Heptane
 - Heat of solution, **5**: 154
 - Solubility, mutual, **3**: 397
- Hexane
 - Boiling point, **3**: 314
 - Compressibility, **3**: 440
 - Heat of solution, **5**: 154
 - Solubility, mutual, **3**: 397
 - Vapor pressure, **3**: 361
- Hydrogen chloride
 - Boiling point, **3**: 311
 - Density, aqueous solution, **3**: 101
 - Freezing point-solubility, **4**: 186
 - Vapor pressure, **3**: 354
- Hydrogen peroxide
 - Distribution coefficients in water, **3**: 419
- Hydroquinol
 - Freezing point-solubility, **4**: 139
- Indigotin
 - Boiling point elevation, **3**: 345
- Iodobenzene
 - Specific heat, **5**: 128
- Isoamyl acetate
 - Density, **3**: 185
 - Viscosity, **5**: 49
- Isoheptane
 - Solubility, mutual, **3**: 397
- Isohexane
 - Solubility, mutual, **3**: 397
- Isocetane
 - Solubility, mutual, **3**: 397
- Isopentane
 - Solubility, mutual, **3**: 397
- Lactic acid
 - Distribution coefficients in water, **3**: 428
- Magnesium bromide
 - Freezing point-solubility, **4**: 203
- Magnesium iodide
 - Freezing point-solubility, **4**: 213
- Mercuric bromide
 - Freezing point-solubility, **4**: 199
- Mercuric cyanide
 - Freezing point-solubility, **4**: 199
- Mercuric iodide
 - Freezing point-solubility, **4**: 213
- Methyl acetate
 - Vapor pressure, **3**: 289
- Methyl alcohol
 - Density, **3**: 151
 - Heat of solution, **5**: 152, 156
 - Specific heat, **5**: 126
 - Vapor pressure, **3**: 287
 - Viscosity, aqueous solution, **5**: 21
- Methylcyclohexane
 - Solubility, mutual, **3**: 397
- Methylcyclopentane
 - Solubility, mutual, **3**: 397
- Naphthalene
 - Density, **7**: 85
 - Heat of solution, **5**: 154
 - Refractive index, **7**: 85
 - Dispersion, **7**: 104
- Naphthol (α -, β -)
 - Freezing point-solubility, **4**: 142
- α -Naphthylamine
 - Density, **7**: 85
 - Refractive index, **7**: 85
 - Dispersion, **7**: 104

Aniline.—(Continued)

- β -Naphthylamine
 - Freezing point-solubility, **4**: 142
- Nicotine
 - Density, **3**: 185
- Nitrobenzene
 - Density, **3**: 176
 - Freezing point-solubility, **4**: 128
 - Heat of solution, **5**: 157
 - Refractive index, **7**: 84
 - Dispersion, **7**: 104
 - Specific heat, **5**: 128
 - Viscosity, **5**: 45
- Nitronaphthalene
 - Heat of solution, **5**: 154
- o*-Nitrophenol
 - Density, **3**: 178
 - Freezing point-solubility, **4**: 129
 - Viscosity, **5**: 46
- m*-Nitrophenol
 - Freezing point-solubility, **4**: 130
- p*-Nitrophenol
 - Freezing point-solubility, **4**: 131
- Nitrosobenzene
 - Freezing point-solubility, **4**: 128
- Nitrosodimethylaniline
 - Freezing point-solubility, **4**: 142
- p*-Nitrotoluene
 - Freezing point-solubility, **4**: 178
- Octane
 - Solubility, mutual, **3**: 397
- Pentane
 - Solubility, mutual, **3**: 397
- Phenacetine
 - Density, **3**: 185
- Phenanthrene
 - Freezing point-solubility, **4**: 178
- Phenetole
 - Density, **3**: 185
 - Viscosity, **5**: 49
- Phenol
 - Density, **3**: 182
 - Freezing point-solubility, **4**: 135
 - Heat of solution, **5**: 154
 - Miscibility in water, **3**: 412
 - Vapor pressure, **3**: 361
 - Aqueous solution, **3**: 379
 - Viscosity, **5**: 47
- m*-Phenylenediamine
 - Freezing point-solubility, **4**: 141
- Phenylhydroxylamine
 - Freezing point-solubility, **4**: 141
- Propyl alcohol
 - Density, **3**: 164
 - Heat of solution, **5**: 153, 156
 - Specific heat, **5**: 127
 - Surface tension, **4**: 472
 - Viscosity, **5**: 40
- Pyridine
 - Density, **3**: 170
 - Viscosity, **5**: 30, 42
- Pyridine-Silver nitrate
 - Density, **3**: 143
 - Viscosity, **5**: 30
- Pyrogallol
 - Freezing point-solubility, **4**: 140
 - Heat of solution, **5**: 154
- Quinoline
 - Density, **7**: 85
 - Refractive index, **7**: 85
 - Dispersion, **7**: 104
- Resorcinol
 - Freezing point-solubility, **4**: 138
- Silver nitrate
 - Density, **3**: 139
 - Distribution coefficients in water, **3**: 421
 - Viscosity, **5**: 28
- Silver perchlorate
 - Density, **3**: 139
 - Freezing point-solubility, **4**: 200
 - Freezing point-solubility in water, **4**: 417

Aniline.—(Continued)

- Sodium chloride*
Surface tension, aqueous solution, **4**: 470
- Sulfur*
Freezing point lowering, **4**: 38
Freezing point-solubility, **4**: 35
Solubility, mutual, **3**: 394
- Toluene*
Compressibility, **3**: 440
Density, **3**: 184
Aqueous solution, **3**: 129
Distribution coefficients in water, **3**: 428
Surface tension, **4**: 474
Viscosity, **5**: 48
- o-Toluidine*
Density, **3**: 185
Freezing point-solubility, **4**: 142
Surface tension, **4**: 474
- p-Toluidine*
Freezing point-solubility, **4**: 178
- Tribenzylamine*
Boiling point elevation, **3**: 345
- Trimethylstannic iodide*
Freezing point-solubility, **4**: 198
- 1, 3, 5-Trinitrobenzene*
Freezing point-solubility, **4**: 118
- Trinitrotoluene*
Freezing point-solubility, **4**: 141
- Triphenylmethane*
Boiling point elevation, **3**: 345
Freezing point-solubility, **4**: 142
- Vinylacetonitrile*
Freezing point-solubility, **4**: 113
- Xylene*
Density, **3**: 185
Distribution coefficients in water, **3**: 428
- m-Xylene*
Dielectric constant, **6**: 103
- p-Xylene*
Heat of solution, **5**: 159
- Xylidene*
Freezing point-solubility, **4**: 142
- Aniline benzenesulfonate**
-*Ethyl alcohol*
Boiling point elevation, **3**: 337
-*Methyl alcohol*
Boiling point elevation, **3**: 334
- Aniline formate**
-*Formic acid*
Viscosity, **5**: 33
- Aniline hydrochloride**
Absorption spectra, **5**: 339
Density, aqueous solution, **3**: 62, 114
Diffusion in methyl alcohol, **5**: 73
Electrical conductivity, aqueous solution, **6**: 231, 232
Heat of solution in water, **5**: 149
Surface tension, **4**: 454
Vapor pressure lowering in aqueous solution, **3**: 293
Verdet constant, **6**: 429
Viscosity, aqueous solution, **5**: 13
- Aniline**
- Arsenous bromide*
Freezing point-solubility, **4**: 190
- Ethyl alcohol*
Boiling point elevation, **3**: 336
- Ferric chloride-Hydrogen chloride*
Freezing point-solubility in water, **4**: 303
- Methyl alcohol*
Boiling point elevation, **3**: 333
- Aniline hydriodide**
-*Aniline**
- Iodine*
Freezing point lowering, **4**: 37
- Aniline nitrate**
Heat of solution in water, **5**: 149
Transition temperature, **4**: 8

Aniline salicylate

- Carbon disulfide*
Boiling point elevation, **3**: 330
- Carbon tetrachloride*
Boiling point elevation, **3**: 330
- Chloroform*
Boiling point elevation, **3**: 332
- Aniline sulfate**
Heat of solution in water, **5**: 150
- Anilinocamphor derivatives**
Optical rotatory power, **7**: 451
- Anisalcamphor**
Optical rotatory power, **7**: 354
- Anisaldazine**, surface tension, **4**: 462
- Anisaldehyde**
Absorption spectra, **5**: 333
Dielectric constant, **6**: 93
Diffusion in methyl alcohol, **5**: 73
Electrical conductivity, **6**: 144
Magnetic susceptibility, **6**: 363
Refractive index, **7**: 43
Verdet constant, **6**: 429
- Potassium iodide*
Density, **3**: 142
- Tetrapropylammonium iodide*
Density, **3**: 190
- Trichloroacetic acid*
Freezing point-solubility, **4**: 103
- Anisaldoxime**
Dielectric constant, **6**: 93
Transition temperature, **4**: 8
- Isoamyl acetate*
Viscosity, **5**: 50
- Anisic acid**
Heat of solution in water, **5**: 150
- Ethylene chloride*
Boiling point elevation, **3**: 335
- Propyl alcohol*
Boiling point elevation, **3**: 340
- o*-**Anisidine**
Absorption spectra, **5**: 342
Magnetic susceptibility, **6**: 362
Refractive index, **7**: 41
Verdet constant, **6**: 429
Viscosity, **7**: 218
- Glycerol*
Solubility, mutual, **3**: 396
- Isoamyl acetate*
Density, **3**: 189
Viscosity, **5**: 49
- p*-**Anisidine**
Absorption spectra, **5**: 342
Refractive index, **7**: 41
Verdet constant, **6**: 429
Viscosity, **7**: 218
- Benzene*
Distribution coefficients in water, **3**: 430
- Anisole**
Absorption spectra, **5**: 332, 341
Azeotropic mixtures, **3**: 321-322
Birefringence, **7**: 111
Boiling point, **3**: 223, 346
Compressibility, **3**: 37
Critical point data, **3**: 249
Dielectric constant, **6**: 92
Diffusion in methyl alcohol, **5**: 73
Heat of vaporization, **5**: 137
Magnetic susceptibility, **6**: 362
Refractive index, **7**: 41
Specific heat, **5**: 111
Surface tension, **4**: 437, 456
Verdet constant, **6**: 429
Viscosity, **5**: 34; **7**: 218
- Acetanilide**
- Acetone**
- Anthracene*
Boiling point elevation, **3**: 346
- Antimony tribromide*
Freezing point-solubility, **4**: 196

Anisole.—(Continued)

- Antimony trichloride*
Freezing point-solubility, **4**: 192
- Benzene*
Dielectric constant, **6**: 103
Vapor pressure, **3**: 289
- Benzoic acid*
Distribution coefficient in water, **3**: 429
- Benzyl chloride*
Freezing point-solubility, **4**: 149
- Carbon disulfide*
Vapor pressure, **3**: 286
- Carbon tetrachloride*
Vapor pressure, **3**: 285
- Diethyl tartrate*
Density, **3**: 189
- Ethyl alcohol*
Density, **3**: 160
Vapor pressure, **3**: 288
Viscosity, **5**: 38
- Ethyl ether*
Vapor pressure, **3**: 289
- Glycerol*
Solubility, mutual, **3**: 395
- Isoamyl acetate*
Density, **3**: 188
Viscosity, **5**: 49
- Mandelic acid*
Distribution coefficient in water, **3**: 431
- Methyl alcohol*
Density, **3**: 151
Viscosity, **5**: 34
- Naphthalene*
Density, **7**: 86
Refractive index, **7**: 86
Dispersion, **7**: 105
- Quinoline*
Density, **7**: 86
Refractive index, **7**: 86
Dispersion, **7**: 105
- Triphenylmethane*
Boiling point elevation, **3**: 346
- m-Xylene*
Dielectric constant, **6**: 103
- Anisyl alcohol**
Verdet constant, **6**: 429
- Anisylideneaniline**
-*Benzalaniline*
Freezing point-solubility, **4**: 162
- Annabergite**
Density, **1**: 132
Refractive index, **1**: 132, 172
- Anomalistic**, definition, **1**: 34
- Anorthite**
Density, **1**: 145
Melting point, **1**: 54, 145; **4**: 84
Refractive index, **1**: 145, 171; **7**: 25
Specific heat, **2**: 101; **5**: 99
- Albite**
- Albite*-Diopside*
- Aluminum oxide**
- Aluminum strontium silicate**
- Calcium silicate*
Freezing point-solubility, **4**: 85, 89
- Diopside*
Freezing point-solubility, **4**: 90, 92
- Forsterite-Silica*
Freezing point-solubility, **4**: 94, 96
- Gehlenite*
Freezing point-solubility, **4**: 91, 92
- Magnesium orthosilicate*
Freezing point-solubility, **4**: 85, 89
- Magnesium silicate*
Freezing point-solubility, **4**: 85, 89
- Nephelite*
Freezing point-solubility, **4**: 91, 92
- Silica*
Freezing point-solubility, **4**: 85, 88

* Data for system will be found under this compound in Index. Full explanation on page vii.

Anorthosite

- Bulk density, **2**: 53
- Compressibility, **3**: 51
- Elasticity, **2**: 52

Anthesterol

- Optical rotatory power, **7**: 464

Anthracene

- Absorption spectra, **5**: 350
- Boiling point, **3**: 227
- Cryoscopic constant, **4**: 184
- Diffusion of vapor in air, **5**: 63
- Electrical conductivity, **6**: 144
- Heat of combustion, **5**: 164
- Heat of fusion, **5**: 134
- Ignition temperature, **2**: 174
- Magnetic susceptibility, **6**: 363
- Photochemical polymerization, **7**: 162, 165
- Photoconductivity, **6**: 66
- Photoelectric threshold, **6**: 68
- Photoluminescence, **5**: 387
- Solubility in mixed liquids, **4**: 171
- Specific heat, **5**: 104
- Vapor pressure
 - Liquid, **3**: 227
 - Solid, **3**: 208
- Acetic acid*
- Acetone*
- Acetonitrile*
- Acridine*
- Aniline*
- Anisole*
- Arsenous chloride
 - Boiling point elevation, **3**: 329
- Benzene
 - Boiling point elevation, **3**: 345
 - Density, **3**: 181
 - Freezing point-solubility, **4**: 177
- Camphor
 - Freezing point-solubility, **4**: 159
- Carbazole
 - Freezing point-solubility, **4**: 160
- Carbazole-Chrysene
 - Freezing point-solubility, **4**: 171
- Carbazole-Phenanthrene
 - Freezing point-solubility, **4**: 171
- Carbon disulfide
 - Boiling point elevation, **3**: 330
 - Freezing point-solubility, **4**: 172
- Carbon tetrachloride
 - Freezing point-solubility, **4**: 172
- Chlorobenzene
 - Freezing point-solubility, **4**: 176
- Chloroform
 - Boiling point elevation, **3**: 332
- Chloroform-Tetrapropylammonium iodide
 - Boiling point elevation, **3**: 348
- Chrysene
 - Freezing point-solubility, **4**: 181
- Decalin
 - Boiling point elevation, **3**: 347
- Dinitrobenzene (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 124
- 2, 4-Dinitrophenol
 - Freezing point-solubility, **4**: 176
- 2, 4-Dinitrotoluene
 - Freezing point-solubility, **4**: 147
- 2, 6-Dinitrotoluene
 - Freezing point-solubility, **4**: 148
- 3, 4-Dinitrotoluene
 - Freezing point-solubility, **4**: 148
- 3, 5-Dinitrotoluene
 - Freezing point-solubility, **4**: 148
- Diphenylamine
 - Freezing point-solubility, **4**: 161
- Ethyl acetate
 - Freezing point-solubility, **4**: 174
- Ethyl alcohol
 - Freezing point-solubility, **4**: 111
- Ethylene bromide
 - Boiling point elevation, **3**: 335

Anthracene.—(Continued)

- Fenchone
 - Boiling point elevation, **3**: 347
- Methyl alcohol
 - Freezing point-solubility, **4**: 173
- Methylacridine
 - Freezing point-solubility, **4**: 163
- Naphthalene
 - Density, **7**: 89
 - Freezing point-solubility, **4**: 156
 - Refractive index, **7**: 89
- β -Naphthol
 - Freezing point-solubility, **4**: 180
- Naphthylamine (α -, β -)
 - Freezing point-solubility, **4**: 158, 180
- Nitrobenzene
 - Boiling point elevation, **3**: 343
 - Freezing point-solubility, **4**: 177
- Nitrophenol (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 130, 131, 177
- Phenanthrene
 - Freezing point-solubility, **4**: 163
- Phenetole
 - Boiling point elevation, **3**: 346
- Phosphorus trichloride
 - Boiling point elevation, **3**: 329
- Picramide
 - Freezing point-solubility, **4**: 127
- Picric acid
 - Freezing point-solubility, **4**: 121
- Picryl chloride
 - Freezing point-solubility, **4**: 117
- Piperidine
 - Boiling point elevation, **3**: 343
- Pyridine
 - Boiling point elevation, **3**: 342
 - Freezing point-solubility, **4**: 117
- Quinoline
 - Density, **7**: 88
 - Refractive index, **7**: 88
 - Dispersion, **7**: 107
- p*-Quinone
 - Freezing point-solubility, **4**: 127
- Resorcinol
 - Freezing point-solubility, **4**: 139
- Retene
 - Freezing point-solubility, **4**: 163
- Stannic chloride
 - Boiling point elevation, **3**: 329
- Styphnic acid
 - Freezing point-solubility, **4**: 122
- Sulfur monochloride
 - Boiling point elevation, **3**: 328
- Tetrachloroethane
 - Freezing point-solubility, **4**: 173
- 1, 2, 3, 4-Tetrahydronaphthalene
 - Boiling point elevation, **3**: 347
- Toluene
 - Freezing point-solubility, **4**: 179
- p*-Toluidine
 - Freezing point-solubility, **4**: 152
- 1, 3, 5-Trinitrobenzene
 - Freezing point-solubility, **4**: 119
- 2, 4, 6-Trinitrotoluene
 - Freezing point-solubility, **4**: 146
- Anthracene picrate
 - Benzene
 - Boiling point elevation, **3**: 345
- Anthranilic acid. *See o*-Aminobenzoic acid.
- Anthranol, photoluminescence, **5**: 387
- Anthranol methyl ether
 - Quinoline
 - Density, **7**: 88
 - Refractive index, **7**: 88
 - Dispersion, **7**: 107
- Anthraquinone
 - Absorption spectra, **5**: 349
 - Boiling point, **3**: 227
 - Cryoscopic constant, **4**: 184

Anthraquinone.—(Continued)

- Heat of combustion, **5**: 167
- Heat of fusion, **5**: 134
- Magnetic susceptibility, **6**: 363
- Specific heat, **5**: 104
- Vapor pressure
 - Liquid, **3**: 227
 - Solid, **3**: 208
- Acetic acid*
- Acetone*
- Aniline*
- Benzene
 - Boiling point elevation, **3**: 345
 - Density, **3**: 181
 - Freezing point-solubility, **4**: 177
- Chloroform
 - Density, **3**: 148
 - Freezing point-solubility, **4**: 172
- Ethyl alcohol
 - Freezing point-solubility, **4**: 174
- Ethyl ether
 - Freezing point-solubility, **4**: 174
- Fenchone
 - Boiling point elevation, **3**: 347
- Methyl alcohol
 - Freezing point-solubility, **4**: 173
- Nitrobenzene
 - Boiling point elevation, **3**: 343
 - Freezing point-solubility, **4**: 177
- Pyridine
 - Freezing point-solubility, **4**: 174
- Quinoline
 - Boiling point elevation, **3**: 346
- Selenium
 - Freezing point lowering, **4**: 38
- Sulfur
 - Freezing point lowering, **4**: 38
- Tetrachloroethane
 - Freezing point-solubility, **4**: 173
- Toluene
 - Freezing point-solubility, **4**: 179
- Anthraquinone dyes
 - Absorption spectra, **7**: 199
- Antifriction alloys, **2**: 371, 557
- Antigorite
 - Density, **1**: 142
 - Refractive index, **1**: 142, 169
- "Anti-knock" effect, **2**: 162, 184
- Antimonial lead, **2**: 371, 475, 557
- Antimonic acid, heat of formation, **5**: 180
- Antimonous acid
 - Albedo, **5**: 262
 - Heat of formation, **5**: 180
- Antimonous oxychloride
 - Heat of formation, **5**: 180
- Antimony
 - Absorption, index of, **5**: 250
 - Boiling point, **1**: 102; **3**: 205
 - Cathodoluminescence, **5**: 390
 - Compressibility
 - Liquid, **3**: 47
 - Single crystal, **3**: 49
 - Solid, **3**: 49
 - Contact potential, **6**: 57
 - Corbino effect, **6**: 419
 - Density
 - Liquid, **1**: 102; **2**: 457, 463
 - Solid, **1**: 104; **2**: 456
 - Dissociation constants of polymers, **7**: 242
 - Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 104; **6**: 136-139
 - Low temperature, **6**: 129, 134
 - Magnetic field, effect of, **6**: 423
 - Single crystal, **6**: 129, 135
 - Electrode potential, **6**: 320; **7**: 242
 - Electrons freed by X-rays, energy of **6**: 4

* Data for system will be found under this compound in Index. Full explanation on page vii.

Antimony.—(Continued)

- Emission, spectral, **5**: 254, 255
- Emission spectra, **5**: 312
- Ettingshausen effect, **6**: 419
- Hall effect, **6**: 416, 418
- Heat of fusion, **2**: 458
- Heat of transformation, **2**: 458
- Heat of vaporization, **1**: 102
- Isotopes, **1**: 47
- Magnetic susceptibility, **6**: 355
- Magneton number, **6**: 346
- Mechanical properties, **2**: 557
- Melting point, **1**: 104
- Nernst effect, **6**: 420, 421
- Peltier coefficient, **6**: 227
- Persistent lines, **5**: 324
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 250
- Righi-Leduc effect, **6**: 421
- Specific heat
 - Liquid, **1**: 103; **5**: 94
 - Solid, **1**: 104; **5**: 85, 94
- Spectral series, **5**: 404
- Surface tension, **4**: 440
- Thermal conductivity
 - Crystals, **5**: 231
 - Liquid, **1**: 102
 - Solid, **5**: 220, 221
- Thermal expansion
 - Liquid, **2**: 463
 - Solid, **1**: 104; **2**: 462
- Thermochemistry, **5**: 180
- Thermoelectric properties, **6**: 214
- Vapor pressure, **3**: 205
- Viscosity, liquid, **5**: 10
- Volume change on fusion, **2**: 474
- X-ray absorption limits, **6**: 38, 45
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 38
- X-ray series, limiting frequencies, **6**: 35
- Zeeman effect, **5**: 420
- Aluminum*
 - Specific heat, **5**: 120
- Arsenic-Copper
 - Mechanical properties, **2**: 552
- Bismuth
 - Electrical conductivity, **6**: 165
 - Equilibrium diagram, **2**: 428
 - Magnetic susceptibility, **6**: 365
 - Righi-Leduc effect, **6**: 421
 - Thermal conductivity, **5**: 223
 - Thermoelectric properties, **6**: 218
- Bismuth-Zinc
 - Miscibility relations, **3**: 407
- Cadmium
 - Electrical conductivity, **6**: 167
 - Equilibrium diagram, **2**: 430
 - Thermal conductivity, **5**: 224
 - Thermoelectric properties, **6**: 218
- Calcium
 - Equilibrium diagram, **2**: 428
- Chromium
 - Equilibrium diagram, **2**: 432
 - Specific heat, **5**: 120
- Cobalt
 - Equilibrium diagram, **2**: 431
 - Kerr constant, **6**: 436
 - Specific heat, **5**: 120
- Cobalt-Iron
 - Kerr constant, **6**: 435
- Copper
 - Electrical conductivity, **6**: 171, 197
 - Equilibrium diagram, **2**: 434
 - Magnetic susceptibility, **6**: 365
 - Specific heat, **5**: 120
 - Surface tension, **4**: 440
 - Thermal expansion **2**: 464
 - Viscosity, liquid, **5**: 7, 10

-Copper.—(Continued)

- Volume change on solidification, **2**: 475
- Copper-Lead
 - Thermal conductivity, **5**: 224
 - Volume change on solidification, **2**: 476
- Copper-Lead-Tin
 - Mechanical properties, **2**: 557
 - Thermal conductivity, **5**: 224
 - Volume change on solidification, **2**: 476
- Copper-Lead-Tin-Zinc
 - Mechanical properties, **2**: 569
- Copper-Oxygen
 - Electrical conductivity, **6**: 171
- Copper-Tin
 - Mechanical properties, **2**: 557
 - Volume change on solidification, **2**: 476
- Copper-Tin-Zinc
 - Mechanical properties, **2**: 568
- Gold
 - Equilibrium diagram, **2**: 425
 - Thermoelectric properties, **6**: 217
- Hydrogen sulfide
 - Reaction, **7**: 242
- Iodine
 - Freezing point-solubility, **4**: 24
- Iron
 - Density, **2**: 531
 - Electrical conductivity, **6**: 187
 - Equilibrium diagram, **2**: 452
 - Ferromagnetism, **6**: 396
 - Specific heat, **5**: 118
- Lead
 - Electrical conductivity, **6**: 194, 198
 - Equilibrium diagram, **2**: 415
 - Magnetic susceptibility, **6**: 365
 - Mechanical properties, **2**: 557
 - Specific heat, **5**: 121
 - Thermal conductivity, **5**: 225
 - Thermal expansion, **2**: 474
 - Thermoelectric properties, **6**: 221
 - Viscosity, liquid, **5**: 7
 - Volume change on solidification, **2**: 475
- Lead-Tin
 - Equilibrium diagram, **2**: 418
 - Mechanical properties, **2**: 557
 - Volume change on solidification, **2**: 476
- Lead-Zinc
 - Equilibrium diagram, **2**: 417
 - Miscibility relations, **3**: 408
- Magnesium
 - Equilibrium diagram, **2**: 437
 - Specific heat, **5**: 121
- Manganese
 - Curie point, **6**: 408
 - Equilibrium diagram, **2**: 438
 - Kerr constant, **6**: 436
 - Magnetic properties, **6**: 408
- Mercury
 - Thermoelectric properties, **6**: 220
 - Vapor pressure, partial, **3**: 284
- Nickel
 - Equilibrium diagram, **2**: 440
- Palladium
 - Equilibrium diagram, **2**: 439
- Platinum
 - Equilibrium diagram, **2**: 441
- Selenium
 - Electrical conductivity, **6**: 195
 - Equilibrium diagram, **2**: 441
 - Freezing point-solubility, **4**: 26, 27
- Silicon
 - Equilibrium diagram, **2**: 441
- Silver
 - Density, **2**: 589
 - Electrical conductivity, **6**: 161
 - Equilibrium diagram, **2**: 422

-Silver.—(Continued)

- Magnetic susceptibility, **6**: 365
- Specific heat, **5**: 119
- Thermoelectric properties, **6**: 216
- Sodium
 - Electrical conductivity, **6**: 198
 - Equilibrium diagram, **2**: 438
- Sulfur
 - Freezing point-solubility, **4**: 25
- Tellurium
 - Electrical conductivity, **6**: 196
 - Freezing point-solubility, **4**: 28
 - Magnetic susceptibility, **6**: 365
 - Thermoelectric properties, **6**: 221
- Thallium
 - Equilibrium diagram, **2**: 441
 - Thermal expansion, **2**: 474
- Tin
 - Electrical conductivity, **6**: 195, 200
 - Equilibrium diagram, **2**: 417
 - Magnetic susceptibility, **6**: 365
 - Thermal conductivity, **5**: 226
 - Thermoelectric properties, **6**: 221
- Zinc
 - Density, **2**: 548
 - Electrical conductivity, **6**: 195
 - Equilibrium diagram, **2**: 441
 - Magnetic susceptibility, **6**: 365
 - Righi-Leduc effect, **6**: 421
 - Specific heat, **5**: 121
- Antimony monoselenide**
 - Silver selenide
 - Freezing point-solubility, **4**: 47
- Antimony oxalate**
 - Ammonium fluoride*
 - Boiling point elevation, **3**: 324
- Antimony pentabromide**
 - Dielectric constant, **6**: 76
- Bromine
 - Boiling point elevation, **3**: 324
- Antimony pentachloride**
 - Boiling point, **1**: 111, 162
 - Cryoscopic constant, **4**: 214
 - Density, **1**: 111
 - Heat of formation, **5**: 180
 - Magnetic susceptibility, **6**: 356
 - Melting point, **1**: 111
 - Refractive index, **1**: 111, 165
 - Surface tension, **4**: 447
 - Verdet constant, **6**: 426
- Antimony pentafluoride
 - Freezing point-solubility, **4**: 46, 77
- Antimony trichloride
 - Freezing point-solubility, **4**: 46
- Auric chloride
 - Freezing point-solubility, **4**: 47
- Bromine
 - Freezing point lowering, **4**: 38
- Carbon tetrachloride
 - Boiling point elevation, **3**: 330
- Chlorine
 - Freezing point lowering, **4**: 38
- Chloroform
 - Boiling point elevation, **3**: 331
- Iodine
 - Freezing point lowering, **4**: 38
- Phosgene
 - Boiling point elevation, **3**: 330
- Stannic bromide
 - Freezing point-solubility, **4**: 47
- Stannic chloride
 - Freezing point-solubility, **4**: 47
- Stannic iodide
 - Freezing point-solubility, **4**: 47
- Antimony pentafluoride**
 - Antimony pentachloride*
 - Boiling point elevation, **3**: 325
- Antimony pentaiodide**
 - Iodine
 - Boiling point elevation, **3**: 325
- Antimony pentasulfide**
 - Photoelectric current, **6**: 69

Antimony pentoxideHeat of formation, **5**: 180**Antimony potassium sulfate**, density, **3**: 44**Antimony sodium sulfate**, density, **3**: 44**Antimony steels**Mechanical properties, **2**: 531**Antimony sulfate**, density, **3**: 44**Antimony tetraselenide**-*Silver selenide*Freezing point-solubility, **4**: 47**Antimony tetroxide**Decomposition pressure, **7**: 242Heat of formation, **5**: 180**Antimony tribromide**Density, **3**: 23Dielectric constant, **6**: 76Electrical conductivity, **6**: 147Heat of formation, **5**: 180Heat of fusion, **5**: 131Magnetic susceptibility, **6**: 356Vapor pressure, **3**: 213Viscosity, **5**: 28; **7**: 212-*Acetic acid**-*Acetophenone**-*Aluminum bromide**-*Amylbenzene**-*Anisole**-*Antimony trichloride*Freezing point-solubility, **4**: 46-*Antimony triiodide*Freezing point-solubility, **4**: 47-*Arsenous bromide*Freezing point-solubility, **4**: 46-*Arsenous iodide*Freezing point-solubility, **4**: 46-*Azobenzene*Freezing point-solubility, **4**: 197-*Benzaldehyde*Freezing point-solubility, **4**: 195-*Benzene*Freezing point-solubility, **4**: 195-*Benzenesulfonic acid*Freezing point-solubility, **4**: 195-*Benzil*Freezing point-solubility, **4**: 197-*Benzoic acid*Freezing point-solubility, **4**: 195-*Benzonitrile*Freezing point-solubility, **4**: 195-*Benzophenone*Density, **3**: 137Freezing point-solubility, **4**: 197Viscosity, **5**: 28-*Benzoyl chloride*Freezing point-solubility, **4**: 195-*Bismuth bromide*Freezing point-solubility, **4**: 47-*Bromine*Freezing point lowering, **4**: 36Vapor pressure lowering, **3**: 300-*p-Bromoaniline*Freezing point-solubility, **4**: 195-*Bromobenzene*Freezing point-solubility, **4**: 194- α -*Bromonaphthalene*Freezing point-solubility, **4**: 196-*Chlorobenzene*Freezing point-solubility, **4**: 194-*Chloroform*Boiling point elevation, **3**: 331-*Chloronaphthalene* (α -, β -)Freezing point-solubility, **4**: 196, 197-*Chlorotoluene* (o -, m -, p -)Freezing point-solubility, **4**: 195-*Cyclohexane*Freezing point-solubility, **4**: 195Solubility, mutual, **3**: 394-*p-Cymene*Freezing point-solubility, **4**: 197-*Dibenzyl*Freezing point-solubility, **4**: 197**Antimony tribromide.—(Continued)**-*p-Dibromobenzene*Freezing point-solubility, **4**: 194-*p-Dichlorobenzene*Freezing point-solubility, **4**: 194-*m-Dinitrobenzene*Freezing point-solubility, **4**: 194-*Diphenyl*Freezing point-solubility, **4**: 197-*Diphenylmethane*Freezing point-solubility, **4**: 197-*Ethylbenzene*Freezing point-solubility, **4**: 196-*Fluorobenzene*Freezing point-solubility, **4**: 194-*Iodobenzene*Freezing point-solubility, **4**: 194-*Mercuric bromide*Freezing point-solubility, **4**: 47-*Mesitylene*Freezing point-solubility, **4**: 196-*Naphthalene*Freezing point-solubility, **4**: 197-*Nitrobenzene*Freezing point-solubility, **4**: 194- α -*Nitronaphthalene*Freezing point-solubility, **4**: 197-*Nitrotoluene* (o -, m -, p -)Freezing point-solubility, **4**: 195-*Phenetole*Freezing point-solubility, **4**: 196-*Phenol*Freezing point-solubility, **4**: 195-*Propylbenzene*Freezing point-solubility, **4**: 196-*Pseudocumene*Freezing point-solubility, **4**: 196-*Stannic bromide*Freezing point-solubility, **4**: 47-*Stilbene*Freezing point-solubility, **4**: 197-*Tetrahydrobenzene*Freezing point-solubility, **4**: 195-*Toluene*Freezing point-solubility, **4**: 195-2, 4, 6-*Tribromoaniline*Freezing point-solubility, **4**: 194-*Triphenylmethane*Density, **3**: 137Freezing point-solubility, **4**: 197-*Xylene* (o -, m -, p -)Freezing point-solubility, **4**: 196**Antimony trichloride**Absorption spectra, solutions, **5**: 328Density, **3**: 23Dielectric constant, **6**: 76Electrical conductivity, **6**: 142, 147Heat of formation, **5**: 180Heat of fusion, **5**: 131Magnetic susceptibility, **6**: 356Solubility in water, **4**: 218Surface tension, **4**: 447Transition temperature, **4**: 7

Vapor pressure

Liquid, **3**: 213Solid, **3**: 207Verdet constant, aqueous solution, **6**:

427

Viscosity, **5**: 27-*Acetic acid**-*Acetone**-*Acetophenone**-*Aluminum chloride**-*Ammonium chloride**-*Amylbenzene**-*Aniline**-*Anisole**-*Antimony pentachloride**-*Antimony tribromide**-*Antimony triiodide*Freezing point-solubility, **4**: 46**Antimony trichloride.—(Continued)**-*Arsenous bromide*Freezing point-solubility, **4**: 46-*Arsenous chloride*Freezing point-solubility, **4**: 46-*Arsenous iodide*Freezing point-solubility, **4**: 46-*Arsenous oxide*Freezing point-solubility, **4**: 46-*Azobenzene*Freezing point-solubility, **4**: 194-*Benzaldehyde*Freezing point-solubility, **4**: 191-*Benzene*Density, **3**: 137Freezing point-solubility, **4**: 191Viscosity, **5**: 28-*Benzenesulfonic acid*Freezing point-solubility, **4**: 191-*Benzil*Freezing point-solubility, **4**: 194-*Benzoic acid*Freezing point-solubility, **4**: 191-*Benzonitrile*Freezing point-solubility, **4**: 191-*Benzophenone*Freezing point-solubility, **4**: 194-*Benzoyl chloride*Freezing point-solubility, **4**: 191-*Bismuth trichloride*Freezing point-solubility, **4**: 46-*p-Bromoaniline*Freezing point-solubility, **4**: 191-*Bromobenzene*Freezing point-solubility, **4**: 190- α -*Bromonaphthalene*Freezing point-solubility, **4**: 193-*Chlorobenzene*Freezing point-solubility, **4**: 190-*Chloroform*Boiling point elevation, **3**: 331-*Chloronaphthalene* (α -, β -)Freezing point-solubility, **4**: 193-*Chlorotoluene* (o -, m -, p -)Freezing point-solubility, **4**: 191, 192-*Cyclohexane*Freezing point-solubility, **4**: 191Solubility, mutual, **3**: 394-*p-Cymene*Freezing point-solubility, **4**: 193-*Dibenzyl*Freezing point-solubility, **4**: 194-*p-Dibromobenzene*Freezing point-solubility, **4**: 190-*p-Dichlorobenzene*Freezing point-solubility, **4**: 190-*m-Dinitrobenzene*Freezing point-solubility, **4**: 190-*Diphenyl*Freezing point-solubility, **4**: 193-*Diphenylmethane*Density, **3**: 137Freezing point-solubility, **4**: 194Viscosity, **5**: 28-*Ethyl acetate*Density, **3**: 136-*Ethyl ether*Boiling point elevation, **3**: 341Density, **3**: 136Distribution coefficients in water, **3**:

421

Viscosity, **5**: 27-*Ethylbenzene*Freezing point-solubility, **4**: 192-*Fluorobenzene*Freezing point-solubility, **4**: 190-*Hydrogen chloride*Density, **3**: 133Aqueous solution, **3**: 95Verdet constant, **6**: 427

* Data for system will be found under this compound in Index. Full explanation on page vii.

Antimony trichloride.—(Continued)

- Iodobenzene
Freezing point-solubility, 4: 190
- Mercuric bromide
Freezing point-solubility, 4: 47
- Mercuric chloride
Freezing point-solubility, 4: 46
- Mesitylene
Freezing point-solubility, 4: 193
- Naphthalene
Density, 3: 137
Freezing point-solubility, 4: 193
- Nitrobenzene
Freezing point-solubility, 4: 191
- α -Nitronaphthalene
Freezing point-solubility, 4: 193
- Nitrotoluene (*o*-, *m*-, *p*-)
Freezing point-solubility, 4: 192
- Phenetole
Freezing point-solubility, 4: 192
- Phenol
Freezing point-solubility, 4: 191
- Phosgene
Boiling point elevation, 3: 330
- Potassium bromide
Freezing point-solubility, 4: 47
- Potassium chloride
Electrical conductivity, 6: 150
Freezing point-solubility, 4: 47
- Propylbenzene
Freezing point-solubility, 4: 193
- Pseudocumene
Freezing point-solubility, 4: 193
- Rubidium chloride
Electrical conductivity, 6: 150
- Stannic bromide
Freezing point-solubility, 4: 46
- Stannic chloride
Freezing point-solubility, 4: 46
Solubility, mutual, 3: 393
- Stannic iodide
Freezing point-solubility, 4: 46
- Stannous chloride
Freezing point-solubility, 4: 46
Solubility, mutual, 3: 393
- Stilbene
Freezing point-solubility, 4: 194
- Tetrachloroethane
Density, 3: 136
- Tetrahydrobenzene
Freezing point-solubility, 4: 191
- Thallium monochloride
Electrical conductivity, 6: 150
- Toluene
Freezing point-solubility, 4: 192
- 2, 4, 6-Tribromoaniline
Freezing point-solubility, 4: 190
- Triphenylmethane
Density, 3: 137
Freezing point-solubility, 4: 194
Viscosity, 5: 28
- Xylene (*o*-, *m*-, *p*-)
Freezing point-solubility, 4: 192

Antimony trifluoride

- Heat of formation, 5: 180
- Magnetic susceptibility, 6: 356
- Solubility in water, 4: 218
- Hydrogen fluoride
Freezing point-solubility in water, 4: 273
- Potassium bromide
Freezing point-solubility in water, 4: 273
- Potassium chloride
Freezing point-solubility in water, 4: 273
- Potassium nitrate
Freezing point-solubility in water, 4: 273

Antimony trifluoride.—(Continued)

- Potassium oxalate
Freezing point-solubility in water, 4: 273
- Potassium tartrate
Freezing point-solubility in water, 4: 273
- Antimony triiodide**
Dielectric constant, 6: 76
Electrical conductivity, 6: 147
Heat of formation, 5: 180
Vapor pressure, 3: 213
Volume change on melting, 4: 12
- Antimony tribromide*
- Antimony trichloride*
- Arsenous bromide
Freezing point-solubility, 4: 46
- Arsenous chloride
Boiling point elevation, 3: 329
- Arsenous iodide
Freezing point-solubility, 4: 46
- Carbon disulfide
Boiling point elevation, 3: 330
- Diphenyl
Freezing point-solubility, 4: 197
- Fenchone
Boiling point elevation, 3: 347
- Iodine
Freezing point lowering, 4: 37
- Methylene iodide
Density, 3: 137
- Phosphorus trichloride
Boiling point elevation, 3: 329
- Phosphorus triiodide
Freezing point-solubility, 4: 45
- Stannic chloride
Boiling point elevation, 3: 329
- Antimony trioxide**
Heat of formation, 5: 180
Magnetic susceptibility, 6: 356
Specific heat, 5: 95
Thermal expansion, 3: 43
X-ray diffraction data, 1: 341
- Antimony trisulfide
Freezing point-solubility, 4: 46
- Hydrogen chloride
Freezing point-solubility in water, 4: 298

Antimony triselenide

- Silver selenide
Freezing point-solubility, 4: 47
- Antimony trisulfide**
Compressibility, 3: 50
Density, 1: 111
Electrical conductivity, 6: 146, 154
Emission, spectral, 5: 254, 257, 258
Heat of formation, 5: 180
Heat of fusion, 5: 131
Melting point, 1: 111
Photoconductivity, 6: 66
Refractive index, 1: 111, 173; 7: 19
Aqueous solution, 7: 66
Specific heat, 5: 95
Thermal expansion, 3: 44
Transformation under pressure, 4: 12
- Antimony trioxide*
- Bismuth sulfide
Freezing point-solubility, 4: 47
- Cupric sulfide
Freezing point-solubility, 4: 47
- Cuprous sulfide
Freezing point-solubility, 4: 47
- Lead sulfide
Freezing point-solubility, 4: 47
- Mercuric sulfide
Freezing point-solubility, 4: 47
- Silver sulfide
Freezing point-solubility, 4: 47
- Stannous sulfide
Freezing point-solubility, 4: 47

Antimony trisulfide.—(Continued)

- Sulfur
Boiling point elevation, 3: 325
- Antimonyl barium tartrate**
Pyroelectric effect, 6: 209
- Antimonyl lead tartrate**
Pyroelectric effect, 6: 210
- Antimonyl potassium tartrate**
Crystallography, 1: 323
Freezing point lowering of aqueous solution, 4: 260
Refractive index, 7: 28
- Antimonyl silver tartrate**
Heat of formation, 5: 189
- Antipyrine**
Crystallography, 1: 331
Density, aqueous solution, 3: 115
Diffusion in methyl alcohol, 5: 73
Osmotic pressure, 4: 430
Solubility of salts in, 4: 211
- Acetanilide*
- Antipyrine salicylate
Freezing point-solubility in water, 4: 422
- Benzoic acid
Freezing point-solubility, 4: 149
- Caffeine
Freezing point-solubility, 4: 180
Freezing point-solubility in water, 4: 420
- Catechol
Freezing point-solubility, 4: 138
- Chloral hydrate
Freezing point-solubility, 4: 107
- Chloroform
Distribution coefficients in water, 3: 432
- 2, 4-Dinitrophenol
Freezing point-solubility, 4: 126
- Hydroquinol
Freezing point-solubility, 4: 140
- Naphthol (α -, β -)
Freezing point-solubility, 4: 156
- Nitrophenol (*o*-, *m*-, *p*-)
Freezing point-solubility, 4: 129, 130
- Phenol
Freezing point-solubility, 4: 137
- Phenyl salicylate
Freezing point-solubility, 4: 160
- Pyrogallol
Freezing point-solubility, 4: 141
- Resorcinol
Freezing point-solubility, 4: 139
- Salicylic acid
Freezing point-solubility, 4: 149
- Antipyrine salicylate**
Crystallization velocity, 5: 61
Electrical conductivity, aqueous solution, 6: 258
- Antipyrine*
- Sodium salicylate
Freezing point-solubility in water, 4: 422
- Antlerite**
Density, 1: 122
Refractive index, 1: 122, 172
- Apatite**
Density, 1: 143
Dielectric constant, 6: 99
Magnetic susceptibility, 6: 364
Melting point, 1: 143
Refractive index, 1: 143, 167; 7: 24
Thermal conductivity, 5: 232
- Apex (alloy), 2: 371**
- Aphelion, definition, 1: 34**
- Aphtit (alloy), 2: 371; cf. 480, 601**
- Apiol**
Absorption spectra, 5: 348
Crystallization velocity, 5: 61
Heat of fusion, 5: 134
Refractive index, 7: 57
Specific heat, 5: 104

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Apjohnite**
Density, 1: 137
Refractive index, 1: 137, 168
- Aplite**, compressive strength, 2: 47
- Aplome**, thermal expansion, 3: 45
- Apocinchonine succinate**
Optical rotatory power, 7: 354
- Apogee**, definition, 1: 34
- Apophyllite**
Density, 1: 158
Refractive index, 1: 158, 166; 7: 28
Thermal conductivity, 5: 232
- Apoquinine**
Absorption spectra, ultra-violet, 5: 370
Optical rotatory power, 7: 471
- Aquamarine**, dielectric constant, 6: 99
- Aquopentammine cobaltic tetrathiocyanatodiammine chromiate**
Solubility in aqueous solutions, 7: 338
- Arabia**, weights and measures, 1: 2
- Arabian system**
Weights and measures, 1: 14
- Arabinose**
Diffusion in water, 5: 70
Electrical conductivity, aqueous solution, 6: 270
Heat of combustion, 5: 166
Mutarotation, 2: 351
Optical rotation, 2: 351; 7: 386
Refractive index, 7: 29
Solubility in
Aqueous ethyl alcohol, 4: 404
Ethyl alcohol, 2: 351
- Arabitol**, heat of combustion, 5: 164
- Arachidic acid**
Heat of combustion, 5: 166
-*Lignoceric acid*
Freezing point-solubility, 4: 167
-*Palmitic acid*
Freezing point-solubility, 4: 165
-*Stearic acid*
Freezing point-solubility, 4: 166
- Aragonite**
Compressibility, 3: 50
Density, 1: 143
Dielectric constant, 6: 100
Electrical conductivity, aqueous solution, 6: 258
Emission, spectral, 5: 259
Magnetic susceptibility, 6: 364
Refractive index, 1: 143, 172; 7: 24
Residual rays, 5: 261
Solution velocity in acids, 5: 58
Specific heat, 5: 87, 99
Thermal conductivity, 5: 232
Thermal expansion, 3: 44
See also Calcium carbonate.
- Arbutin**, optical rotatory power, 7: 392
- Arc**, electric, 6: 51
- Arcanite**. *See* Potassium sulfate.
- d'Arcet's alloys**, 2: 375
Specific heat, 5: 121
- Area**
Conversion factors, 1: 22
Secondary units, 1: 2
- Area-time**, conversion factors, 1: 22
- Argent français**, 2: 371
- Argental** (alloy), 2: 371
- Argentium** (alloy), 2: 371
- Argentan** (alloy), 2: 371; *cf.* 480
Electrical conductivity, 6: 171
- Argentin** (alloy), 2: 371; *cf.* 475
- Argentine Republic**
Weights and measures, 1: 2
- Argentite**
Compressibility, 3: 50
Density, 1: 124
Photoconductivity, 6: 66
Transformation temperature, 1: 124
See also Silver sulfide.
- Argilite** (alloy), 2: 371
- Arginine**
Absorption spectra, ultra-violet, 5: 373
Optical rotatory power, 7: 376
- Argon**
Accommodation coefficient, 5: 53
Adsorption by wood charcoal, 3: 250
Boiling point, 1: 102; 3: 203
Compressibility of gas, 3: 4
Critical point data, 1: 102; 3: 203, 248
Critical potentials, 6: 70
Density
Gas, 1: 102; 3: 3
Liquid, 1: 102; 3: 20
Solid, 1: 103; 3: 21
Dielectric constant, 6: 74
Dispersion formulas, 7: 11
Electrons
Absorption of, by, 6: 61
Attachment of, to form ions, 6: 116
Motion of, in, 6: 116
Secondary emission of, 6: 63
Emission spectra, 5: 278
Entropy, 5: 87
Glass, permeability of, 5: 76
Heat content, 5: 87
Heat of adsorption on charcoal, 5: 141
Heat of fusion, 5: 131
Heat of vaporization, 1: 102; 5: 135
Hydrate
Decomposition pressure, 7: 231
Heat of decomposition, 7: 231
Ionization by accelerated electrons, 6: 121
Ionization by α -particles, 6: 122
Ionization by electrons, 6: 120
Ionization by positive residues, 6: 122
Ions, mobility of, in, 6: 111
Isotopes, 1: 45
Light, transmission of, by, 5: 265
Magnetic susceptibility, 6: 354
Melting point, 1: 103
Molecular data, 1: 92
Orthobaric density, 3: 203
Persistent lines, 5: 323
Phosphorescence, 5: 387
Polarization of light scattered by, 5: 265
Quantum numbers, 5: 408
Refractivity, 7: 6
Rubber, permeability of, 2: 272; 5: 76
Solubility in water, 3: 255
Sound, velocity of, in, 6: 462, 463
Specific heat
Gas, 1: 102; 5: 80, 85
Liquid, 1: 103; 5: 85, 87
Solid, 1: 103; 5: 85, 87
Spectral series, 5: 393
Surface tension, 1: 103; 4: 441
Thermal conductivity, 5: 213, 214
Molecular, 5: 215
Thermal expansion
Gas, 3: 3
Liquid, 1: 102; 3: 20
Thermodynamic potential, 5: 87
Triple point, 3: 203
Vapor pressure, 3: 203
Viscosity of gas, 1: 102; 5: 2
X-ray absorption limits, 6: 36
X-ray crystal structure, 1: 340
X-ray diffraction bands, 1: 351
X-rays, emission efficiency, 6: 11
Zeeman effect, 5: 420
- Ethylene*
P-V-T relations, 3: 17
- Helium*
Diffusion coefficient, 5: 62
Thermal conductivity, 5: 214
- Hydrogen*
Electrons, motion of, in, 6: 116
- Nitrogen*
Boiling points, 3: 309, 351
Dew point, 3: 351
- Argon-Nitrogen**.—(Continued)
P-V-T relations, 3: 17
Thermal conductivity, 5: 214
Vapor pressure, 3: 284, 351
- Nitrogen-Oxygen*
Viscosity, 5: 30
- Oxygen*
P-V-T relations, 3: 17
Vapor pressure, 3: 351
- Argozoil** (alloy), 2: 371
- Arguzoid** (alloy), 2: 371
- Argyrodite**, density, 1: 124
Thermal conductivity, 5: 232
- Argyroid** (alloy), 2: 371
- Argyrolith** (alloy), 2: 371
- Argyrophane** (alloy), 2: 371
- Aries**, first point of, 1: 34
- Arizonite**
Density, 1: 129
Refractive index, 1: 129, 174
- Arko** (alloy), 2: 371; *cf.* 555, 601
- Armangite**, density, 1: 127
- Armco iron**, 2: 371, 470, 600, 602, 606
- Armstrong steel**, 2: 371
- Arsenic**
Boiling point, 1: 102; 3: 205
Compressibility, 3: 46
Critical constants, 1: 102
Critical potentials, 6: 70
Density, 1: 103; 2: 456
Electrical conductivity, 1: 103; 6: 136, 137
Electrons freed by X-rays, energy of, 6: 3
Emission spectra, 5: 281
Equilibrium constants of gaseous polymers, 7: 242
Ettingshausen effect, 6: 419
Hall effect, 6: 416
Hardness, 2: 592
Heat of fusion, 1: 103
Heat of transformation, 2: 458
Heat of vaporization, 1: 102
Isotopes, 1: 45
Magnetic susceptibility, 6: 354
Melting point, 1: 103
Nernst effect, 6: 420
Persistent lines, 5: 323
Photoelectric threshold, 6: 68
Pressure-volume relations for gas, 3: 435
Quantum numbers, 5: 408
Refractivity of vapor, 7: 6
Righi-Leduc effect, 6: 421
Specific heat, 1: 103; 5: 92
Spectral series, 5: 394
Thermal expansion, 1: 103; 2: 459
Thermochemistry, 5: 180
Triple point, 3: 205
Vapor pressure, 3: 205
X-ray absorption limits, 6: 37
X-ray crystal structure, 1: 340
X-ray emission spectra, 6: 37
X-ray series, limiting frequencies, 6: 35
- Antimony**
- Antimony*-Copper*
- Barium*
Density, 2: 594
- Bismuth-Copper-Oxygen*
Mechanical properties, 2: 552
- Cadmium*
Density, 2: 548, 594
Equilibrium diagram, 2: 423
Hardness, 2: 593
- Calcium*
Density, 2: 594
- Chromium*
Density, 2: 594
- Cobalt*
Density, 2: 594
Equilibrium diagram, 2: 423

* Data for system will be found under this compound in Index. Full explanation on page vii.

Arsenic.—(Continued)

- Copper
 - Electrical conductivity, 6: 168
 - Equilibrium diagram, 2: 423
 - Mechanical properties, 2: 552
- Copper-Iron
 - Electrical conductivity, 6: 180
- Copper-Iron-Manganese-Phosphorus
 - Electrical conductivity, 6: 173
- Copper-Iron-Silicon
 - Mechanical properties, 2: 552
- Copper-Lead-Tin-Zinc
 - Mechanical properties, 2: 566
- Copper-Nickel
 - Thermal conductivity, 5: 224
- Copper-Oxygen
 - Electrical conductivity, 6: 168
 - Mechanical properties, 2: 552
- Copper-Oxygen-Silver
 - Mechanical properties, 2: 552
- Copper-Tin-Zinc
 - Mechanical properties, 2: 566
- Gold
 - Equilibrium diagram, 2: 423
- Hydrogen sulfide
 - Reaction with, 7: 242
- Iodine
 - Freezing point-solubility, 4: 24
- Iron
 - Electrical conductivity, 6: 173
 - Equilibrium diagram, 2: 450
- Lead
 - Equilibrium diagram, 2: 414
- Manganese
 - Curie point, 6: 407
 - Equilibrium diagram, 2: 424
 - Kerr constant, 6: 436
- Platinum
 - Equilibrium diagram, 2: 424
- Silver
 - Equilibrium diagram, 2: 421
- Strontium
 - Density, 2: 594
- Sulfur
 - Boiling point elevation, 3: 325
 - Freezing point-solubility, 4: 25
- Tellurium
 - Freezing point-solubility, 4: 28
- Thallium
 - Equilibrium diagram, 2: 424
- Zinc
 - Equilibrium diagram, 2: 424
- Arsenic acid**
 - Absorption spectra, solutions, 5: 328
 - Boiling point elevation in aqueous solution, 3: 325
 - Density, aqueous solution, 3: 61
 - Electrical conductivity, aqueous solution, 6: 243, 260
 - Freezing point lowering of aqueous solution, 4: 255
 - Heat of formation, 5: 180
 - Ionization constants, 7: 242
 - Reduction, kinetics of, 7: 150
 - Vapor pressure lowering in aqueous solution, 3: 293
 - Viscosity, aqueous solution, 5: 13
- Ammonium arsenate*
- Calcium oxide
 - Density, aqueous solution, 3: 97
- Molybdenum oxide
 - Density, aqueous solution, 3: 97
- Potassium arsenate
 - Density, aqueous solution, 3: 97
- Sodium arsenate
 - Density, aqueous solution, 3: 97
- Arsenic cobalt sulfide**
 - Photoelectric current, 6: 69
- Arsenic disulfide**
 - Transition temperature, 4: 7

Arsenic iodide

- Density, aqueous solution, 3: 61
- Arsenic iron sulfide**, specific heat, 5: 98
- Arsenic pentoxide**
 - Decomposition pressure of hydrate, 7: 242
 - Density, aqueous solution, 7: 66
 - Heat of formation, 5: 180
 - Refractive index, aqueous solution, 7: 66
- Lead oxide
 - Freezing point-solubility, 4: 46
- Molybdenum trioxide
 - Refractive index, aqueous solution, 7: 92
- Potassium arsenate
 - Freezing point-solubility, 4: 46, 77
- Sodium arsenate
 - Freezing point-solubility, 4: 46, 78
- Arsenic steels**, 2: 529
- Arsenic sulfide**
 - Absorption spectra, solutions, 5: 328
- Arsenosiderite**
 - Density, 1: 145
 - Refractive index, 1: 145, 167
- Arsenite**
 - Density, 1: 110
 - See also Arsenous oxide.
- Arsenoferrite**
 - Density, 1: 129
 - Melting point, 1: 129
- Arsenolite**
 - Density, 1: 110
 - Refractive index, 1: 110, 165
 - See also Arsenous oxide.
- Arsenopyrite**
 - Compressibility, 3: 50
 - Density, 1: 129
- Arsenous acid**
 - Absorption spectra, solutions, 5: 328
 - Electrical conductivity, aqueous solution, 6: 260
 - Free energy of oxidation, 7: 242
 - Freezing point lowering of aqueous solution, 4: 255
 - Heat of formation, 5: 180
 - Ionization constants, 7: 242
- Barium oxide
 - Freezing point-solubility in water, 4: 370
- Calcium arsenate
 - Freezing point-solubility in water, 4: 370, 393
- Lithium hydroxide
 - Freezing point-solubility in water, 4: 370
- Potassium hydroxide
 - Freezing point-solubility in water, 4: 370
- Sodium hydroxide
 - Freezing point-solubility in water, 4: 370
- Arsenous bromide**
 - Density, 1: 110; 3: 23
 - Dielectric constant, 6: 76
 - Electrical conductivity, 6: 142
 - Heat of formation, 5: 180
 - Heat of fusion, 5: 131
 - Melting point, 1: 110
 - Surface tension, 4: 447
- Aluminum bromide*
- Aniline hydrochloride*
- Antimony tribromide*
- Antimony trichloride*
- Antimony triiodide*
- Arsenous chloride
- Freezing point-solubility, 4: 46
- Arsenous iodide
 - Freezing point-solubility, 4: 46

Arsenous bromide.—(Continued)

- Bromine
 - Boiling point elevation, 3: 324
 - Freezing point lowering, 4: 36
- Ferric chloride
 - Freezing point-solubility, 4: 46
- Naphthalene
 - Freezing point-solubility, 4: 190
- α -Naphthol
 - Freezing point-solubility, 4: 190
- Phenol
 - Freezing point-solubility, 4: 190
- Resorcinol
 - Freezing point-solubility, 4: 190
- Stannic bromide
 - Freezing point-solubility, 4: 46
- Stannic iodide
 - Freezing point-solubility, 4: 46
- Urethan
 - Freezing point-solubility, 4: 190
- Arsenous chloride**
 - Absorption spectra, solutions, 5: 328
 - Boiling point, 1: 110, 162; 3: 329
 - Density, 1: 110; 3: 23
 - Dielectric constant, 6: 76
 - Electrical conductivity, 6: 142
 - Heat of formation, 5: 180
 - Melting point, 1: 110
 - Refractive index, 1: 110, 166
 - Specific heat, 5: 81, 95
 - Surface tension, 4: 447
 - Vapor pressure, 3: 213
 - Verdet constant, 6: 426
- Anthracene*
- Antimony trichloride*
- Antimony triiodide*
- Arsenous bromide*
- Arsenous iodide
 - Boiling point elevation, 3: 329
- Arsenous oxide
 - Boiling point elevation, 3: 329
- Chlorine
 - Freezing point-solubility, 4: 30
- Ethyl ether
 - Distribution coefficients in water, 3: 421
- Phosgene
 - Boiling point elevation, 3: 330
- Stannic iodide
 - Boiling point elevation, 3: 329
- Sulfur
 - Boiling point elevation, 3: 329
- Arsenous fluoride**, density, 3: 23
- Arsenous iodide**
 - Density, 1: 110
 - Dielectric constant, 6: 76
 - Heat of formation, 5: 180
 - Melting point, 1: 110
- Antimony tribromide*
- Antimony trichloride*
- Antimony triiodide*
- Arsenous bromide*
- Arsenous chloride*
- Carbon disulfide
 - Boiling point elevation, 3: 330
- Fenchone
 - Boiling point elevation, 3: 347
- Iodine
 - Freezing point lowering, 4: 37
- Methylene iodide
 - Density, 3: 136
- Phosphorus trichloride
 - Boiling point elevation, 3: 329
- Phosphorus triiodide
 - Freezing point-solubility, 4: 45
- Stannic chloride
 - Boiling point elevation, 3: 329
- Arsenous oxide**
 - Density, 3: 43
 - Aqueous solution, 3: 61; 7: 66
 - Heat of formation, 5: 180

* Data for system will be found under this compound in Index. Full explanation on page vii.

Arsenous oxide.—(Continued)

- Magnetic susceptibility, **6**: 356
 Refractive index, aqueous solution, **7**: 66
 Rubber vulcanization, use in, **2**: 279
 Solubility in water, **4**: 251
 Specific heat, **5**: 95
 Thermal expansion, **3**: 43
 Vapor pressure
 Liquid, **3**: 213
 Solid, **3**: 207
 X-ray diffraction data, **1**: 341
See also Arsenite, Arsenolite, Claudetite.
 -Ammonia*
 -Ammonium bromide*
 -Ammonium chloride*
 -Amyl alcohol*
 -Antimony trichloride*
 -Arsenous chloride*
 -Barium bromide
 Freezing point-solubility in water, **4**: 317
 -Barium chloride
 Freezing point-solubility in water, **4**: 298
 -Calcium bromide
 Freezing point-solubility in water, **4**: 317
 -Calcium chloride
 Freezing point-solubility in water, **4**: 298
 -Fenchone
 Boiling point elevation, **3**: 347
 -Lithium bromide
 Freezing point-solubility in water, **4**: 317
 -Lithium chloride
 Freezing point-solubility in water, **4**: 298
 -Nitrobenzene
 Boiling point elevation, **3**: 343
 -Perchloric acid
 Freezing point-solubility in water, **4**: 316
 -Potassium bromide
 Freezing point-solubility in water, **4**: 317
 -Potassium chloride
 Freezing point-solubility in water, **4**: 298
 -Potassium iodide
 Freezing point-solubility in water, **4**: 319
 -Sodium bromide
 Freezing point-solubility in water, **4**: 317
 -Sodium chloride
 Freezing point-solubility in water, **4**: 298
 -Strontium bromide
 Freezing point-solubility in water, **4**: 317
 -Strontium chloride
 Freezing point-solubility, **4**: 298
 -Sulfuric acid
 Boiling point elevation, **3**: 328
 Density, aqueous solution, **3**: 96
 Vapor pressure, aqueous solution, **3**: 376

Arsenous selenide

- Silver selenide
 Freezing point-solubility, **4**: 46

Arsenous sulfide

- Heat of formation, **5**: 180
 Magnetic susceptibility, **6**: 356
 Refractive index, aqueous solution, **7**: 66
 Transition temperature, **4**: 7
See also Orpiment.
 -Ethyl ether
 Distribution coefficients in water, **3**: 421

Arsenous sulfide.—(Continued)

- Lead sulfide
 Freezing point-solubility, **4**: 46
 -Silver sulfide
 Freezing point-solubility, **4**: 46
 -Sulfur
 Boiling point elevation, **3**: 325
 Freezing point lowering, **4**: 37
 -Thallous sulfide
 Freezing point-solubility, **4**: 46
Arsine
 Boiling point, **3**: 230
 Decomposition pressure of hydrate, **7**: 242
 Density, gas, **3**: 3
 Dielectric constant, **6**: 76
 Heat of formation, **5**: 180
 Solubility in water, **3**: 259
 Toxicology, **2**: 318
 Vapor pressure above 1 atm., **3**: 230
 Viscosity, gas, **5**: 3
Artemisone, optical rotatory power, **7**: 465
Artichoke juices
 Hydrolysis, velocity of, **2**: 350
Artinite
 Density, **1**: 141
 Refractive index, **1**: 141, 170
Asbestos
 Moisture content at various humidities, **2**: 316, 324
 Slate
 Density, **2**: 313
 Thermal conductivity, **2**: 313
 Wool
 Density, **2**: 313
 Thermal conductivity, **2**: 313
Asbestos-diatomite
 Density, **2**: 313
 Thermal conductivity, **2**: 313
Asbestos mill board, **2**: 46
Asbestos paper
 Density, **2**: 311
 Dielectric strength, **2**: 310
 Electrical conductivity, **2**: 310
 Moisture content at various humidities, **2**: 323
 Thermal conductivity, **2**: 311
Asbestos pipe covering
 Density, **2**: 313
 Thermal conductivity, **2**: 313
Asbestos wood, **2**: 46
Ascharite
 Density, **1**: 142
 Refractive index, **1**: 142, 170
Ascoloy, **2**: 371; cf. 508, 600
Ash wood
 Density, **2**: 314
 Thermal conductivity, **2**: 314
Ashberry metal (Ashberrium), **2**: 371; cf. 557
Ashes, wood, thermal conductivity, **2**: 312
Asparagine
 Absorption spectra, ultra-violet, **5**: 373
 Crystallography, **1**: 324
 Density, aqueous solution, **3**: 114
 Electrical conductivity, aqueous solution, **6**: 267
 Heat of combustion, **5**: 167
 Optical rotatory power, **7**: 354, 377
 Refractive index, **7**: 29
 Solubility in water, **4**: 252
 -Acetic acid*
Aspartic acid
 Absorption spectra, ultra-violet, **5**: 373
 Crystallography, **1**: 324
 Density, aqueous solution, **3**: 114
 Electrical conductivity, aqueous solution, **6**: 267
 Heat of combustion, **5**: 167
 Heat of solution in water, **5**: 149
 Hydrolysis, **7**: 147

Aspartic acid.—(Continued)

- Optical rotatory power, **7**: 377
 Solubility in salt solutions, **4**: 415
 Surface tension, aqueous solution, **4**: 468
 -Acetic acid*
Asphalt composition
 Density, **2**: 315
 Thermal conductivity, **2**: 315
Asphalt roofing, **2**: 46
Asphalts, **2**: 168
 Blown petroleum, **2**: 169
 Density, **2**: 311
 Dielectric constant, **2**: 310
 Dielectric strength, **2**: 310
 Native, **2**: 169
 Nomenclature, **2**: 168
 Pyrogenous, **2**: 169
 Residual, **2**: 169
 Sludge, **2**: 169
 Specific heat, **2**: 168
 Thermal conductivity, **2**: 168
 Thermal expansion, **2**: 311
 Wurtzilite, **2**: 169
Aspidospermatine
 Optical rotatory power, **7**: 476
Aspidospermine
 Optical rotatory power, **7**: 476
Asphaltites
 Nomenclature, **2**: 168
 Properties, **2**: 169
Aspirin. *See* Acetylsalicylic acid.
Assay ton, definition of, **1**: 34
Assyro-Chaldean-Persian system
 Weights and measures, **1**: 14
Astro gamma, photographic plates, **5**: 444
Atacamite
 Density, **1**: 122
 Heat of formation, **5**: 187
 Refractive index, **1**: 122, 173
Atelestite
 Density, **1**: 112
 Refractive index, **1**: 112, 173
Aterite (alloy), **2**: 372
ATG alloy, **2**: 372
Atisine, optical rotatory power, **7**: 476
Atmosphere, **1**: 18
 Composition, **1**: 393
 Definition, **1**: 34
 Electrical conductivity, **6**: 444
 Electrostatic condition, **2**: 321
 Ionic content, **6**: 444
 Mass of, **1**: 393
 Normal, definition of, **1**: 34
 Opacity, **5**: 268
 Potential gradient, **6**: 442
 Radon content, **1**: 372
Atmospheric electricity, **6**: 442
Atomic number
 Magnetic susceptibility, relation to, **6**: 348
 Table of, **1**: 43
 X-ray data, variation with, **6**: 27–45
Atomic radii, **6**: 350
Atomic weights, table of, **1**: 43
Atoms
 Critical potentials, **6**: 69–72
 Electronic orbits, **1**: 47
 Electronic structure, **6**: 28, 70–72
 Notation, **6**: 25–26
 Energy levels, **5**: 392; **6**: 25
 Excitation
 Critical potentials, **6**: 69
 Work of, **6**: 72
 Moseley's diagram of limits of series, **6**: 31
 Normal state, **1**: 47
 Optical spectra, **5**: 408
 Quantum mechanics, **1**: 47
 Screening numbers, **6**: 29, 31
 Structure, **1**: 47; **5**: 408
 Normal and excited, **6**: 28, 70–72
 X-ray spectra, **6**: 29

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Atropic acid**
Absorption spectra, **5**: 344
Electrical conductivity, aqueous solution, **6**: 290
Heat of combustion, **5**: 165
- Atropine**
Absorption spectra, **5**: 344, 352
Electrical conductivity, aqueous solution, **6**: 301
-*Chloroform*
Distribution coefficients in water, **3**: 432
- Atropine sulfate**
Absorption spectra, ultra-violet, **5**: 367
- Attaite**
Density, **1**: 115
Melting point, **1**: 115
See also Lead telluride.
- Attenuation**, coefficient of, **6**: 458
- Aucubin**, optical rotatory power, **7**: 392
- Audition**, physical aspects, **1**: 94; **6**: 450
- Auer metal**, **2**: 372
- Auer oxides**, electrical conductivity, **6**: 155
- Augelite**
Density, **1**: 137
Refractive index, **1**: 137, 170
- Augite**
Compressibility, **3**: 50
Dielectric constant, **6**: 99
Magnetic susceptibility, **6**: 364
- Auric bromide**
Ammines, **7**: 273
Decomposition pressure, **7**: 273
Heat of formation, **5**: 189
- Auric chloride**
Ammines, **7**: 273
Decomposition pressure, **7**: 273
Density, aqueous solution, **3**: 67
Heat of formation, **5**: 189
Magnetic susceptibility, **6**: 357
Sublimation pressure, **7**: 273
Vapor pressure, **3**: 208
-*Antimony pentachloride**
- Auric cyanide**
Density, aqueous solution, **3**: 67
- Auric hydroxide**
Heat of formation, **5**: 189
Ionization constant, **7**: 273
-*Nitric acid*
Solubility in water, **7**: 273
-*Sulfuric acid*
Solubility in water, **7**: 273
- Auric oxide**
Entropy, **7**: 273
Free energy, **7**: 273
Heat content, **7**: 273
Heat of formation, **5**: 189
Reduction, free energy and electrode potential, **7**: 273
- Aurichlorohydric acid**
Heat of formation, **5**: 189
- Aurin**
Absorption spectra, **5**: 353
Magnetic susceptibility, **6**: 364
- Aurobromohydric acid**
Heat of formation, **5**: 189
- Aurodibenzylsulfine chloride**
Refractive index, **7**: 21
- Aurora**, **6**: 449
- Aurous bromide**
Ammines
Heat of formation, **5**: 189
Decomposition pressure, **7**: 273
Heat of formation, **5**: 189
- Aurous chloride**
Ammine
Decomposition pressure, **7**: 273
Heat of formation, **5**: 189
Band spectra, **5**: 411
Decomposition pressure, **7**: 273
Heat of formation, **5**: 189
- Aurous cyanide**
-*Potassium cyanide*
Freezing point-solubility in water, **4**: 377
- Aurous iodide**
Ammines
Heat of formation, **5**: 189
Heat of formation, **5**: 189
Specific heat, **5**: 97
-*Potassium iodide*
Solubility in water, **7**: 273
- Aurous oxide**
Reduction, electrode potential, **7**: 273
-*Nitric acid*
Solubility in water, **7**: 273
- Austria**, weights and measures, **1**: 3
- Austrian alloy**, **2**: 372
- Automolite**
Density, **1**: 137
Refractive index, **1**: 137, 165
- Autunite**
Density, **1**: 145
Refractive index, **1**: 145, 170
- Avogadrite**, refractive index, **7**: 28
- Avogadro's number**
Definition, **1**: 34
Value, **1**: 18
- Awaruite (alloy)**, **2**: 372
- Azelaic acid**
Electrical conductivity, aqueous solution, **6**: 293
Heat of combustion, **5**: 166
Refractive index, **7**: 48
-*Ethyl ether*
Distribution coefficients in water, **3**: 432
- Azeotropic mixtures**, **3**: 318
- Azimuthal quantum number**, **6**: 25
- Azine dyes**, absorption spectra, **7**: 195
- Azo compounds**
Reduction constants, **7**: 147
- Azo dyes**, absorption spectra, **7**: 175
- p-Azoanisole**
Magnetic susceptibility, **6**: 363
-*p-Azoanisole-phenetole*
Freezing point-solubility, **4**: 164
-*p-Azophenetole*
Freezing point-solubility, **4**: 164
-*p-Azoxyanisole*
Freezing point-solubility, **4**: 164
-*p-Methylpropylazophenol*
Freezing point-solubility, **4**: 164
- p-Azoanisole-phenetole**
-*p-Azoanisole**
-*p-Azoxyanisole*
Freezing point-solubility, **4**: 164
-*p-Azoxyphenetole*
Freezing point-solubility, **4**: 164
-*p-Dipropylazophenol*
Freezing point-solubility, **4**: 164
- Azobenzene**
Absorption spectra, **5**: 333, 348, 375
Crystallization velocity, **5**: 61
Cryoscopic constant, **4**: 184
Crystallography, **1**: 331
Diffusion in ethyl alcohol, **5**: 74
Heat of combustion, **5**: 168
Heat of fusion, **5**: 134
Magnetic susceptibility, **6**: 363
Rubber, solubility in, **2**: 272
Specific heat, **5**: 104
Transition velocity, **5**: 61
-*Acetic acid**
-*Acetone**
-*Amyl acetate**
-*Antimony tribromide**
-*Antimony trichloride**
-*Azonaphthalene*
Freezing point-solubility, **4**: 161
-*p-Azotoluene*
Freezing point-solubility, **4**: 181
- Azobenzene**.—(Continued)
-*Azoxybenzene*
Freezing point-solubility, **4**: 180
-*Benzalaniline*
Density, **3**: 194
Freezing point-solubility, **4**: 160
-*Benzene*
Density, **3**: 181
Heat of solution, **5**: 154
-*Benzeneazobenzene*
Freezing point-solubility, **4**: 161
-*Benzil*
Freezing point-solubility, **4**: 161
-*Benzoin*
Freezing point-solubility, **4**: 161
-*Benzylaniline*
Freezing point-solubility, **4**: 160
-*Benzylideneaniline*
Viscosity, **5**: 51
-*Carbon disulfide*
Boiling point elevation, **3**: 330
Density, **3**: 146
Heat of solution, **5**: 151
-*Catechol*
Freezing point-solubility, **4**: 138
-*Chloroform*
Boiling point elevation, **3**: 332
Density, **3**: 148
-*Cinnamylideneacetophenone*
Freezing point-solubility, **4**: 161
-*Dibenzyl*
Density, **3**: 194
Freezing point-solubility, **4**: 161
Viscosity, **5**: 51
-*p-Dimethoxystilbene*
Freezing point-solubility, **4**: 161
-*2, 4-Dinitrophenol*
Freezing point-solubility, **4**: 126
-*Ethyl acetate*
Density, **3**: 167
-*Ethyl acetoacetate*
Density, **3**: 185
-*Ethyl alcohol*
Boiling point elevation, **3**: 337
Heat of solution, **5**: 153
-*Ethyl butyrate*
Density, **3**: 186
-*Ethyl chloroacetate*
Density, **3**: 165
-*Ethyl ether*
Boiling point elevation, **3**: 341
Density, **3**: 168
Heat of solution, **5**: 153
-*Ethyl propionate*
Density, **3**: 172
-*Ethylene bromide*
Density, **3**: 155
-*Hexane*
Density, **3**: 186
-*Hydrazobenzene*
Freezing point-solubility, **4**: 180
-*Hydroquinol*
Freezing point-solubility, **4**: 140
-*Iodine*
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 34
-*Isoamyl acetate*
Density, **3**: 190
-*Methyl acetate*
Density, **3**: 164
-*Methyl benzoate*
Density, **3**: 191
-*Methyl butyrate*
Density, **3**: 172
-*Methyl propionate*
Density, **3**: 167
-*Naphthol* (α -, β -)
Freezing point-solubility, **4**: 156, 157
-*Nitrobenzene*
Density, **3**: 178

* Data for system will be found under this compound in Index. Full explanation on page vii.

Azobenzene.—(Continued)

- Nitrophenol (*o*-, *m*-, *p*-)
 - Freezing point-solubility, 4: 129–132
- Palmitic acid
 - Density, 3: 194
- Paraldehyde
 - Density, 3: 186
- Picric acid
 - Freezing point-solubility, 4: 121
- Propyl butyrate
 - Density, 3: 190
- Pyrogallol
 - Freezing point-solubility, 4: 141
- Resorcinol
 - Freezing point-solubility, 4: 139
- Stilbene
 - Density, 3: 194
 - Freezing point-solubility, 4: 161
 - Viscosity, 5: 51
- Tolane
 - Freezing point-solubility, 4: 160
- Toluene
 - Density, 3: 188
- m*-, *m'*-Azobenzoic acid
 - Heat of solution in water, 5: 150
- Azocumic acid
 - Heat of solution in water, 5: 150
- Azonaphthalene
 - Azobenzene*
 - Stilbene
 - Freezing point-solubility, 4: 163
- p*-Azophenetole
 - Absorption spectra, 5: 351
 - Magnetic susceptibility, 6: 364
 - Transition temperature, 4: 8
 - p*-Azoanisole*
 - p*-Azoxyphenetole
 - Freezing point-solubility, 4: 165
 - p*-Dipropylazophenol
 - Freezing point-solubility, 4: 165
- Azotoluene
 - Magnetic susceptibility, 6: 363
 - Azobenzene*
 - Stilbene
 - Freezing point-solubility, 4: 163
- p*-, *p'*-Azoxyanisole
 - Cryoscopic constant, 4: 184
 - Dielectric constant, 6: 96, 105
 - Melting point under pressure, 4: 10
 - Surface tension, 4: 461
 - p*-Azoanisole*
 - p*-Azoanisole-phenetole*
 - p*-Azoxyphenetole
 - Density, 3: 195
 - Freezing point-solubility, 4: 164
 - Benzene
 - Freezing point-solubility, 4: 134
 - Benzophenone
 - Freezing point-solubility, 4: 162
 - Hydroquinol
 - Freezing point-solubility, 4: 140
 - p*-Methoxycinnamic acid
 - Freezing point-solubility, 4: 158
 - Nitrobenzene
 - Freezing point-solubility, 4: 129
- Azoxybenzene
 - Absorption spectra, 5: 351
 - Cryoscopic constant, 4: 184
 - Heat of fusion, 5: 134
 - Surface tension, 4: 461
 - Azobenzene*
- p*-Azoxyphenetole
 - Absorption spectra, 5: 351
 - Dielectric constant, 6: 96, 105
 - Melting point under pressure, 4: 10
 - Surface tension, 4: 462
 - p*-Azoanisole-phenetole*
 - p*-Azophenetole*
 - p*-Azoxyanisole*
 - Cholesteryl benzoate
 - Freezing point-solubility, 4: 165

***p*-Azoxyphenetole.**—(Continued)

- Cholesteryl isobutyrate
 - Freezing point-solubility, 4: 165
- Cholesteryl propionate
 - Freezing point-solubility, 4: 165
- p*-Methoxycinnamic acid
 - Freezing point-solubility, 4: 158
- o*-, *o'*-Azoxytoluene
 - Surface tension, 4: 461
- Azurite
 - Density, 1: 123
 - Reflectivity, selective, 5: 260
 - Refractive index, 1: 123, 173
 - Solution velocity in acids, 5: 58, 59
 - Thermal expansion, 3: 44
- "B" alloy, 2: 372, 601; *cf.* 537
- B. T. G. steel, 2: 373; *cf.* 467, 480
- Babbitt metals, 2: 372
- Baddeleyite
 - Density, 1: 114
 - Refractive index, 1: 114, 173
 - See also* Zirconium dioxide.
- Bagasse board. *See* Celotex.
- Bahn Metall, 2: 372; *cf.* 556
- Bakelite, 2: 298
- Bakerite
 - Density, 1: 145
 - Refractive index, 1: 145, 171
- Baking industry, air conditioning in, 2: 322
- Balata
 - Chemical composition, 2: 294
 - Density, 2: 294
 - Dielectric constant, 2: 273
 - Electrical conductivity, 2: 273
 - Power factor, 2: 273
- Baleaic Islands
 - Weights and measures, 1: 3
- Ball clay
 - Moisture content at various humidities, 2: 324
- Ballistic pendulum test (explosives), 7: 489
- Balsa wood
 - Density, 2: 313
 - Thermal conductivity, 2: 313
- Band spectra, diatomic molecules, 5: 409
- Baobab wood, thermal conductivity, 2: 314
- Bar, definition, 1: 34
- Barbituric acid
 - Absorption spectra, 5: 336, 366, 367
- Bario (alloy), 2: 372
- Barite
 - Electrical conductivity, aqueous solution, 6: 256
 - Solubility in water, 6: 256
 - Thermal conductivity, 5: 232
 - See also* Barium sulfate.
- Barium
 - Ammine
 - Decomposition pressure, 7: 299
 - Heat of decomposition, 7: 299
 - Boiling point, 1: 102; 3: 205
 - Cathodoluminescence, 5: 389
 - Critical potentials, 6: 70
 - Density, 1: 103; 2: 456
 - Electrons freed by X-rays, energy of, 6: 3
 - Emission spectra, 5: 283
 - Heat of vaporization, 1: 102
 - Isotopes, 1: 45
 - Magnetic susceptibility, 6: 354
 - Melting point, 1: 103
 - Persistent lines, 5: 323
 - Photoelectric sensitivity, wave-length for maximum, 6: 68
 - Quantum numbers, 5: 408
 - Specific heat, 5: 92
 - Spectral series, 5: 395
 - Thermochemistry, 5: 198
 - Vapor pressure, 3: 205
 - X-ray absorption limits, 6: 39

Barium.—(Continued)

- X-ray emission spectra, 6: 39
- X-ray series, limiting frequencies, 6: 35
- X-rays, absorption coefficient, 6: 13, 14
- Zeeman effect, 5: 420
- Arsenic*
- Boron
 - Density, 2: 594
- Calcium-Lead
 - Mechanical properties, 2: 556
- Mercury
 - Surface tension, 2: 591
 - Vapor pressure, partial, 3: 284
- Barium acetate
 - Crystallography, 1: 322
 - Density, 1: 148
 - Aqueous solution, 3: 76
 - Electrical conductivity, aqueous solution, 6: 246, 254
 - Freezing point lowering of aqueous solution, 4: 258
 - Heat of formation, 5: 199
 - Refractive index, 1: 148, 169
 - Aqueous solution, 7: 72
 - Solubility in water, 4: 233
 - Specific heat, aqueous solution, 5: 123
 - Surface tension, aqueous solution, 4: 465
 - Vapor pressure lowering in aqueous solution, 3: 296
 - Viscosity, aqueous solution, 5: 15
 - Acetic acid*
 - Ethyl alcohol
 - Freezing point-solubility in water, 4: 407
- Barium aluminium orthosilicate
 - Melting point, 4: 85
- Barium amide, heat of formation, 5: 199
- Barium arsenate, heat of formation, 5: 199
- Barium arsenite
 - Magnetic susceptibility, 6: 360
- Barium benzoate
 - Solubility in water, 4: 233
- Barium bicarbonate
 - Free energy of ionization, 7: 301
 - Ionization constant, 7: 301
- Barium bisulfite, heat of formation, 5: 198
- Barium borofluoride
 - Vapor pressure lowering in aqueous solution, 3: 296
- Barium bromate
 - Boiling point elevation in aqueous solution, 3: 326
 - Dielectric constant, 6: 77
 - Electrical conductivity, aqueous solution, 6: 246
 - Freezing point lowering of aqueous solution, 4: 258
 - Reflectivity, selective, 5: 260
 - Solubility in water, 4: 232
 - Barium nitrate
 - Density, aqueous solution, 3: 99
 - Solubility in water, 7: 344
 - Magnesium nitrate
 - Density, aqueous solution, 3: 98
 - Solubility in water, 7: 344
 - Potassium bromate
 - Density, aqueous solution, 3: 99
 - Solubility in water, 7: 344
 - Potassium nitrate
 - Density, aqueous solution, 3: 99
 - Solubility in water, 7: 344
- Barium bromide
 - Ammines
 - Decomposition pressure, 7: 300
 - Heat of decomposition, 7: 300
 - Heat of formation, 5: 199
 - Boiling point elevation in aqueous solution, 3: 326
 - Compressibility, 3: 50
 - Concentration cells, 6: 327

* Data for system will be found under this compound in Index. Full explanation on page vii.

Barium bromide.—(Continued)

- Decomposition pressure of hydrates, 7: 299
 Density, 1: 147
 Aqueous solution, 3: 75, 108
 Dielectric constant, 6: 77
 Electrical conductivity, aqueous solution, 6: 234, 239
 Freezing point lowering of aqueous solution, 4: 258
 Heat of formation, 5: 198
 Magnetic susceptibility, 6: 360
 Melting point, 1: 147
 Refractive index, 1: 147, 172; 7: 26
 Solubility in water, 4: 232
 Transference number, 6: 311
 Vapor pressure lowering in aqueous solution, 3: 296
 Viscosity, aqueous solution, 5: 15
 -*Aluminum bromide**
 -*Arsenous oxide**
 -*Barium chloride*
 Freezing point-solubility, 4: 65
 -*Barium hydroxide*
 Freezing point-solubility in water, 4: 318, 387; 7: 343
 -*Ethyl alcohol*
 Freezing point-solubility, 4: 204
 -*Lead bromide*
 Freezing point-solubility in water, 4: 318; 7: 317
 -*Lead chloride*
 Freezing point-solubility in water, 4: 275
 -*Lithium bromide*
 Freezing point-solubility, 4: 66
 -*Mercuric bromide*
 Freezing point-solubility in water, 4: 318
 -*Methyl alcohol*
 Boiling point elevation, 3: 334
 Density, 3: 140
 -*Potassium bromide*
 Freezing point-solubility, 4: 66
 -*Sodium bromide*
 Freezing point-solubility, 4: 66
Barium butyrate
 Solubility in water, 4: 233
 -*Ethyl alcohol*
 Freezing point-solubility in water, 4: 407
Barium cadmium bromide
 Density, 1: 148
 Refractive index, 1: 148, 172
Barium cadmium chloride
 Density, 1: 148
 Refractive index, 1: 148, 172
 Solubility in water, 4: 233
Barium d-camphorate
 -*d-Camphoric acid*
 Freezing point-solubility in water, 4: 422
Barium carbonate
 Compressibility, 3: 50
 Decomposition pressure, 7: 300, 301
 Density, 1: 148
 Dielectric constant, 6: 100
 Electrical conductivity, aqueous solution, 6: 257
 Emission, spectral, 5: 259
 Heat of decomposition, 7: 300
 Heat of formation, 5: 199
 Heat of transition, 5: 199
 Magnetic susceptibility, 6: 360
 Reflectivity, selective, 5: 260
 Refractive index, 1: 148, 172
 Residual rays, 5: 261
 Specific heat, 5: 100
 Sulfate ion, reaction with, 7: 300
 Transition point, 1: 148; 4: 7
 See also Witherite.

Barium carbonate.—(Continued)

- Barium chloride*
 Freezing point-solubility, 4: 65
 -*Carbon dioxide*
 Reaction in water, 7: 300
 -*Potassium sulfate*
 Freezing point-solubility in water, 4: 334, 389; 7: 300
 -*Sodium carbonate*
 Freezing point-solubility, 4: 66
Barium chlorate
 Boiling point elevation in aqueous solution, 3: 326
 Density, 1: 147
 Aqueous solution, 3: 75
 Saturated, 3: 105
 Electrical conductivity, aqueous solution, 6: 246, 254
 Freezing point lowering of aqueous solution, 4: 258
 Heat of formation, 5: 198
 Melting point, 1: 147
 Reflectivity, selective, 5: 260
 Refractive index, 1: 147, 170
 Aqueous solution, 7: 72
 Solubility in water, 4: 232
 Specific heat, 5: 99
 Vapor pressure lowering in aqueous solution, 3: 296
 -*Sodium chlorate*
 Freezing point-solubility, 4: 66
Barium chloride
 Absorption spectra, 5: 329
 Adsorption by charcoal, 3: 252
 Ammine
 Decomposition pressure, 7: 299
 Heat of decomposition, 7: 299
 Heat of formation, 5: 199
 Boiling point elevation in aqueous solution, 3: 326
 Compressibility, 3: 50
 Aqueous solution, 3: 439
 Concentration cells, 6: 327
 Density, 1: 147
 Aqueous solution, 3: 75, 108
 Liquid, 3: 24
 Dielectric constant, 6: 77
 Aqueous solution, 6: 104
 Diffusion in water, 5: 66
 Electrical conductivity, 6: 149
 Aqueous solution, 6: 233, 239
 Freezing point lowering of aqueous solution, 4: 258
 Heat of dilution with water, 5: 161
 Heat of formation, 5: 198
 Heat of fusion, 5: 131
 Hydrates
 Decomposition pressure, 7: 299
 Heat of decomposition, 7: 299
 Magnetic susceptibility, 6: 360
 Melting point, 1: 147
 Refractive index, 1: 147, 171
 Aqueous solution, 7: 72
 Solubility in antimony trichloride, 4: 47
 Solubility in nitrobenzene, 4: 210
 Solubility in water, 4: 232
 Solution velocity in water, 5: 56
 Sound, velocity of, in aqueous solution, 6: 464
 Specific heat, 5: 99
 Aqueous solution, 5: 123
 Surface tension, 4: 442
 Aqueous solution, 4: 465
 Thermal conductivity, 5: 229
 Transference number, 6: 310, 311
 Transition point, 1: 147; 4: 7
 Vapor pressure, aqueous solution, 3: 368
 Vapor pressure lowering in aqueous solution, 3: 296
 Viscosity, aqueous solution, 5: 15

Barium chloride.—(Continued)

- X-rays, absorption coefficient, 6: 13
 -*Acetone**
 -*Acetone**-*Ammonium chloride*
 -*Aluminum chloride**
 -*Ammonium chloride**
 -*Ammonium chloride**-*Cupric chloride*
 -*Arsenous oxide**
 -*Barium bromide**
 -*Barium carbonate**
 -*Barium chromate*
 Freezing point-solubility, 4: 65
 -*Barium fluoride*
 Freezing point-solubility, 4: 65
 -*Barium hydroxide*
 Solubility in water, 7: 343
 -*Barium iodide*
 Freezing point-solubility, 4: 65
 -*Barium nitrate*
 Boiling point elevation in aqueous solution, 3: 348
 Density, aqueous solution, 3: 99
 Freezing point-solubility in water, 4: 290
 Viscosity, aqueous solution, 5: 19
 -*Barium oxide*
 Freezing point-solubility, 4: 65
 -*Barium oxide*-*Calcium oxide*
 Freezing point-solubility, 4: 75
 -*Barium phosphate*
 Freezing point-solubility, 4: 65
 -*Barium silicate*
 Freezing point-solubility, 4: 65
 -*Barium sulfate*
 Freezing point-solubility, 4: 65
 -*Bismuth trichloride*
 Boiling point elevation, 3: 329
 -*Cadmium chloride*
 Freezing point-solubility, 4: 55
 -*Calcium chloride*
 Freezing point-solubility, 4: 63
 Thermal conductivity, aqueous solution, 5: 229
 -*Calcium chloride*-*Strontium chloride*
 Freezing point-solubility, 4: 75, 81
 -*Cobaltous chloride*
 Boiling point elevation in aqueous solution, 3: 348
 -*Cupric chloride*
 Freezing point-solubility in water, 4: 306
 -*Cupric chloride*-*Potassium chloride*
 Freezing point-solubility in water, 4: 307, 386
 -*Cupric chloride*-*Sodium chloride*
 Freezing point-solubility in water, 4: 306, 386
 -*Diethyl tartrate*
 Density, aqueous solution, 3: 102
 -*Ethyl alcohol*
 Freezing point-solubility in water, 4: 407
 -*Formamide*
 Viscosity, 5: 29
 -*Glycocol*
 Freezing point-solubility in water, 4: 404
 -*Hydrogen chloride*
 Density, aqueous solution, 3: 96
 Freezing point-solubility in water, 4: 312
 -*Hydrogen chloride*-*Sodium chloride*
 Freezing point-solubility in water, 4: 313
 -*Lead bromide*
 Freezing point-solubility in water, 4: 275
 -*Lead chloride*
 Freezing point-solubility, 4: 51
 Freezing point-solubility in water, 4: 304

* Data for system will be found under this compound in Index. Full explanation on page vii.

Barium chloride.—(Continued)-*Lithium chloride*Freezing point-solubility, **4**: 65-*Magnesium chloride*Freezing point-solubility, **4**: 62-*Magnesium chloride-Potassium chloride*Freezing point-solubility, **4**: 75-*Manganous chloride*Freezing point-solubility, **4**: 60-*Mercuric chloride*Freezing point-solubility in water,
4: 305, 386-*Methyl alcohol*Freezing point-solubility in water,
4: 400-*Phthalic acid*Density, aqueous solution, **3**: 102Freezing point-solubility in water,
4: 419-*Potassium carbonate*Solubility in water, **7**: 300-*Potassium chloride*Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 66Freezing point-solubility in water,
4: 313Viscosity, aqueous solution, **5**: 19-*Potassium chloride-Sodium chloride*Freezing point-solubility, **4**: 75, 82-*Potassium chloride-Strontium chloride*Freezing point-solubility, **4**: 75, 82-*Potassium perchlorate*Solubility in water, **7**: 345-*Silver chloride*Solubility in water, **7**: 266-*Sodium acetate*Density, aqueous solution, **3**: 99-*Sodium chloride*Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 65Freezing point-solubility in water,
4: 312Viscosity, aqueous solution, **5**: 19-*Sodium chloride-Strontium chloride*Freezing point-solubility, **4**: 75, 82-*Sodium nitrate*Freezing point-solubility in water, **4**:
290, 291, 383-*Sodium oxide*Freezing point-solubility in water, **4**:
312, 386-*Strontium chloride*Freezing point-solubility, **4**: 64-*Strontium oxide*Freezing point-solubility, **4**: 64-*Sulfuric acid*Freezing point-solubility in water, **4**:
287-*Thallium monochloride*Freezing point-solubility, **4**: 53; **7**: 321-*Zinc chloride*Freezing point-solubility, **4**: 54**Barium chlorite**Heat of formation, **5**: 198Solubility in water, **4**: 232**Barium chlorofluoride**Density, **1**: 147Melting point, **1**: 147Refractive index, **1**: 147, 167**Barium chloroplatinate**Heat of formation, **5**: 199**Barium chromate**Dielectric constant, **6**: 77Electrical conductivity, aqueous solu-
tion, **6**: 257Heat of formation, **5**: 199Reflectivity, selective, **5**: 260Solubility in hydrochloric acid, **7**: 301Solubility in nitric acid, **7**: 301-*Barium chloride****Barium chromate.**—(Continued)-*Ethyl alcohol*Freezing point-solubility in water, **4**:
408**Barium cinnamate**Solubility in water, **4**: 233**Barium copper cyanide**Density, aqueous solution, **3**: 76**Barium cyanate**, heat of formation, **5**: 199**Barium cyanide**, heat of formation, **5**: 199**Barium cyanoplatinite**Luminescence, **5**: 389**Barium dicadmium chloride**Solubility in water, **4**: 233**Barium dicalcium metasilicate**Decomposition temperature, **4**: 85Refractive index, **7**: 26**Barium dicalcium propionate**Refractive index, **1**: 149, 165**Barium dinitrosalicylate**Solubility in water, **4**: 233-*Ethyl alcohol*Freezing point-solubility in water, **4**:
408**Barium dithionate**Boiling point elevation in aqueous solu-
tion, **3**: 326Density, **1**: 147Electrical conductivity, aqueous solu-
tion, **6**: 246Freezing point lowering of aqueous
solution, **4**: 258Heat of formation, **5**: 198Magnetic susceptibility, **6**: 360Refractive index, **1**: 147, 171Solubility in water, **4**: 232Vapor pressure lowering in aqueous
solution, **3**: 296-*Ammonium dithionate**-*Ethyl alcohol*Freezing point-solubility in water, **4**:
407-*Magnesium dithionate*Freezing point-solubility in water, **4**:
356-*Potassium dithionate*Freezing point-solubility in water, **4**:
356-*Sodium dithionate*Freezing point-solubility in water, **4**:
356**Barium electrode**, potential of, **6**: 319**Barium ethylate**, heat of formation, **5**: 199**Barium ferrocyanide**Heat of formation, **5**: 199**Barium fluoride**Band spectra, **5**: 411Dielectric constant, **6**: 77Electrical conductivity, aqueous solu-
tion, **6**: 257Heat of formation, **5**: 198Magnetic susceptibility, **6**: 360X-ray diffraction data, **1**: 345-*Barium chloride**-*Barium iodide*Freezing point-solubility, **4**: 65-*Barium phosphate*Freezing point-solubility, **4**: 65-*Calcium fluoride-Magnesium fluoride*Freezing point-solubility, **4**: 75-*Potassium fluoride*Freezing point-solubility, **4**: 65-*Strontium fluoride*Freezing point-solubility, **4**: 64**Barium fluosilicate**Decomposition pressure, **7**: 301Heat of formation, **5**: 199**Barium formate**Crystallography, **1**: 322Density, **1**: 148Aqueous solution, **3**: 76; **7**: 72**Barium formate.**—(Continued)Electrical conductivity, aqueous solu-
tion, **6**: 246Heat of formation, **5**: 199Pyroelectricity, **6**: 209Refractive index, **1**: 148, 171; **7**: 26Aqueous solution, **7**: 72Specific heat, **5**: 100Surface tension, aqueous solution, **4**: 465-*Formic acid*Freezing point-solubility, **4**: 204-*Lead formate*Density, aqueous solution, **3**: 97**Barium glycolate**Heat of solution in water, **5**: 149**Barium hydrogen arsenate**Heat of formation, **5**: 199**Barium hydrogen sulfate**Heat of formation, **5**: 198**Barium hydrosulfide**Solubility in water, **4**: 232**Barium hydroxide**Boiling point elevation in aqueous solu-
tion, **3**: 326Decomposition pressure, **7**: 299Density, **1**: 147Aqueous solution, **3**: 75Dielectric constant, aqueous solution, **6**:
104Diffusion in water, **5**: 66Electrical conductivity, aqueous solu-
tion, **6**: 246Free energy of decomposition, **7**: 299Heat of decomposition, **7**: 299Heat of formation, **5**: 198

Hydrates

Decomposition pressure, **7**: 299Free energy and heat of decomposi-
tion, **7**: 299Hydration temperature, **1**: 66Magnetic susceptibility, **6**: 360Melting point, **1**: 147Refractive index, **1**: 147, 169Solubility in water, **4**: 232Pressure, effect of, **4**: 265Surface tension, aqueous solution, **4**: 465Vapor pressure, aqueous solution, **3**: 368Vapor pressure lowering in aqueous solu-
tion, **3**: 296Viscosity, aqueous solution, **5**: 15-*Acetone**-*Barium bromide**-*Barium chloride**-*Barium iodide*Freezing point-solubility in water, **4**:
320; **7**: 343-*Barium nitrate*Density, aqueous solution, **3**: 99Solubility in water, **7**: 343-*Hydrogen chloride*Freezing point-solubility in water,
4: 312, 386-*Lithium chloride*Freezing point-solubility in water,
4: 312; **7**: 343-*Phenol*Freezing point-solubility in water, **4**:
416-*Potassium chloride*Freezing point-solubility in water, **4**:
313; **7**: 344-*Resorcinol*Freezing point-solubility in water, **4**:
417-*Rubidium chloride*Freezing point-solubility in water, **4**:
313; **7**: 344-*Sodium chloride*Freezing point-solubility in water, **4**:
312, 313, 386; **7**: 343

* Data for system will be found under this compound in Index. Full explanation on page vii.

Barium hydroxide.—(Continued)-*Sodium hydroxide*Solubility in water, **7**: 343**Barium hypophosphite**, electrical conductivity, aqueous solution, **6**: 246**Barium iodate**Boiling point elevation in aqueous solution, **3**: 326Dielectric constant, **6**: 77Freezing point lowering of aqueous solution, **4**: 258Heat of formation, **5**: 198Solubility in water, **4**: 232-*Barium nitrate*Solubility in water, **7**: 344-*Potassium iodate*Solubility in water, **7**: 344-*Potassium nitrate*Solubility in water, **7**: 344**Barium iodide**

Ammines

Decomposition pressures, **7**: 300Heat of decomposition, **7**: 300Heat of formation, **5**: 199Decomposition pressure of hydrate, **7**: 300Density, **1**: 147Aqueous solution, **3**: 76, 108Electrical conductivity, aqueous solution, **6**: 235, 239Freezing point lowering of aqueous solution, **4**: 258Heat of formation, **5**: 198Magnetic susceptibility, **6**: 360Aqueous solution, **6**: 364Solubility in water, **4**: 232Sulfur dioxide complexes, decomposition pressure, **7**: 300Transference number, **6**: 311-*Barium chloride**-*Barium fluoride**-*Barium hydroxide**-*Ethyl alcohol*Freezing point-solubility, **4**: 204-*Iodine*Freezing point-solubility in water, **4**: 267-*Iodine-Nitrobenzene*Freezing point-solubility, **4**: 269, 270-*Mercuric iodide*Density, **3**: 134Aqueous solution, **7**: 96Freezing point-solubility in water, **4**: 319Refractive index, aqueous solution, **7**: 96-*Methyl acetate*Boiling point elevation, **3**: 340**Barium isosuccinate**Solubility in water, **4**: 232**Barium isovalerate**Surface tension, aqueous solution, **4**: 465-*Isovaleric acid*Surface tension, aqueous solution, **4**: 470**Barium malate**Density, aqueous solution, **3**: 76Solubility in water, **4**: 232**Barium malonate**Solubility in water, **4**: 232**Barium manganate**Absorption spectra, solutions, **5**: 329Electrical conductivity, aqueous solution, **6**: 246Magnetic susceptibility, **6**: 360**Barium mercuric bromide**Heat of formation, **5**: 199**Barium mercuric cyanide**Heat of formation, **5**: 199**Barium mercuric iodide**Emission, spectral, **5**: 257**Barium mesodisilicate**Density, **1**: 148Melting point, **4**: 85Refractive index, **1**: 148, 174; **7**: 26-*Barium mesotrisilicate*Freezing point-solubility, **4**: 85, 88**Barium mesotrisilicate**Density, **1**: 148Melting point, **4**: 85Refractive index, **1**: 148, 171; **7**: 26-*Barium mesodisilicate****Barium metasilicate**Density, **1**: 148Melting point, **1**: 148; **4**: 84Refractive index, **1**: 148, 172; **7**: 26-*Calcium metasilicate*Freezing point-solubility, **4**: 85, 88**Barium molybdate**, specific heat, **5**: 100**Barium molybdomalate**Optical rotatory power, **7**: 353**Barium naphthalene-1, 5-disulfonate**Density, **1**: 148Refractive index, **1**: 148, 172**Barium nickel cyanide**Heat of formation, **5**: 199**Barium nitrate**Absorption spectra, **5**: 330Activity coefficient in water, **7**: 300Boiling point elevation in aqueous solution, **3**: 326Density, **1**: 147Aqueous solution, **3**: 76, 108Saturated, **3**: 105Dielectric constant, **6**: 77Electrical conductivity, aqueous solution, **6**: 231, 238Freezing point lowering of aqueous solution, **4**: 258Heat of dilution with water, **5**: 162Heat of formation, **5**: 198Magnetic susceptibility, **6**: 360Melting point, **1**: 147Reflectivity, selective, **5**: 260Refractive index, **1**: 147, 165; **7**: 13Solubility in water, **4**: 232Specific heat, **5**: 99Aqueous solution, **5**: 123Surface tension, aqueous solution, **4**: 465Transference number, **6**: 310Vapor pressure, aqueous solution, **3**: 368Vapor pressure lowering in aqueous solution, **3**: 296Viscosity, aqueous solution, **5**: 15X-ray diffraction data, **1**: 345-*Ammonium nitrate**-*Barium bromate**-*Barium chloride**-*Barium hydroxide**-*Barium iodate**-*Ethyl alcohol*Freezing point-solubility in water, **4**: 407-*Formamide*Density, **3**: 140Viscosity, **5**: 29-*Lead bromide*Solubility in water, **7**: 317-*Lead nitrate*Boiling point elevation in aqueous solution, **3**: 347Density, aqueous solution, **3**: 97Freezing point-solubility in water, **4**: 361-*Lead nitrate-Potassium nitrate*Freezing point-solubility in water, **4**: 361-*Lithium nitrate*Freezing point-solubility, **4**: 66-*Lithium nitrate-Potassium nitrate*Freezing point-solubility, **4**: 75, 82**Barium nitrate.**—(Continued)-*Magnesium chloride-Strontium nitrate*Viscosity, aqueous solution, **5**: 19-*Nitric acid*Density, aqueous solution, **3**: 97Viscosity, aqueous solution, **5**: 18-*Potassium nitrate*Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 66Freezing point-solubility in water, **4**: 365Viscosity, aqueous solution, **5**: 19-*Potassium nitrate-Sodium nitrate*Freezing point-solubility, **4**: 82-*Potassium perchlorate*Solubility in water, **7**: 346-*Silver bromate*Solubility in water, **7**: 322-*Sodium chloride*Boiling point elevation in aqueous solution, **3**: 348Freezing point-solubility in water, **4**: 290, 383-*Sodium nitrate*Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 66Freezing point-solubility in water, **4**: 364Viscosity, aqueous solution, **5**: 19-*Strontium nitrate*Boiling point elevation in aqueous solution, **3**: 348-*Sulfuric acid*Freezing point-solubility in water, **4**: 324**Barium nitride**, heat of formation, **5**: 198**Barium nitrite**Density, aqueous solution, **3**: 105Electrical conductivity, aqueous solution, **6**: 246Freezing point lowering of aqueous solution, **4**: 258Heat of formation, **5**: 198Solubility in water, **4**: 232Vapor pressure, aqueous solution, **3**: 368-*Silver nitrite*Freezing point-solubility in water, **4**: 357, 391**Barium orthosilicate**Melting point, **4**: 84Refractive index, **1**: 148, 174**Barium oxalate**Electrical conductivity, aqueous solution, **6**: 256Heat of formation, **5**: 199Solubility in water, **6**: 256-*Acetic acid**-*Ammonium chloride**-*Potassium chloride*Solubility in water, **7**: 344-*Sodium chloride*Solubility in water, **7**: 344**Barium oxide**Band spectra, **5**: 411Electrical conductivity, **6**: 154Electrons, thermal emission of, **6**: 54Freezing point lowering of aqueous solution, **4**: 258Heat of formation, **5**: 198Magnetic susceptibility, **6**: 360Melting point, **4**: 84Photoelectric threshold, **6**: 68Thermionic work function, **6**: 54, 56X-ray diffraction data, **1**: 345-*Aluminum oxide**-*Aluminum oxide**-*Silica*-*Arsenous acid**-*Barium chloride**-*Barium chloride**-*Calcium oxide*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Barium oxide.—(Continued)

- Boric oxide*
Freezing point-solubility, 4: 85
- Calcium chloride*
Freezing point-solubility, 4: 63
- Carbon dioxide*
Vapor pressure, aqueous solution, 3: 377
- Hydrogen chloride-Sodium oxide*
Freezing point-solubility in water, 4: 312, 386
- Nitric acid*
Freezing point-solubility in water, 4: 364
- Silica*
Freezing point-solubility, 4: 85, 87
- Sodium oxide*
Freezing point-solubility in water, 4: 380
- Strontium chloride*
Freezing point-solubility, 4: 64
- Barium oxycarbonate**
Decomposition pressure, 7: 301
- Barium perchlorate**
Density, aqueous solution, 3: 105
Heat of formation, 5: 198
Solubility in water, 4: 232
Transition temperature, 4: 7
- Acetone**
- Butyl alcohol*
Density, 3: 140
- Ethyl acetate*
Density, 3: 140
- Ethyl alcohol*
Density, 3: 140
- Glycocol*
Freezing point-solubility in water, 4: 404
- Isobutyl alcohol*
Density, 3: 140
- Methyl alcohol*
Density, 3: 140
- Propyl alcohol*
Density, 3: 140
- Barium peroxide**
Decomposition pressure, 7: 299
Heat of formation, 5: 198
Hydrate
Decomposition pressure, 7: 299
Equilibrium constant of decomposition, 7: 299
Free energy of decomposition, 7: 299
- Barium phenol-2, 4-disulfonate**
Crystallography, 1: 322
Refractive index, 1: 148, 171
- Barium phosphate**
Heat of formation, 5: 199
- Barium chloride**
- Barium fluoride**
- Barium picrate**
Heat of solution in water, 5: 149
Solubility in water, 4: 233
- Ethyl alcohol*
Freezing point-solubility in water, 4: 407
- Barium platinocyanide**
Density, 1: 148
Refractive index, 1: 148, 174; 7: 26
- Barium propionate**
Crystallography, 1: 322
Density, aqueous solution, 3: 76; 7: 72
Electrical conductivity, aqueous solution, 6: 246, 254
Heat of solution in water, 5: 148
Refractive index, 1: 148, 169
Aqueous solution, 7: 72
Solubility in water, 4: 233
- Ethyl alcohol*
Freezing point-solubility in water, 4: 407

Barium selenate

- Heat of formation, 5: 198
Solubility in water, 4: 232
- Barium selenide**
Heat of formation, 5: 198
X-ray diffraction data, 1: 345
- Barium silicate**
Heat of formation, 5: 199
- Barium chloride**
- Barium sulfide*
Freezing point-solubility, 4: 66
- Barium silver cyanide**
Heat of formation, 5: 199
- Barium sodium arsenate**
Heat of formation, 5: 203
- Barium sodium phosphate**
Heat of formation, 5: 203
- Barium succinate**
Solubility in water, 4: 232
- Calcium succinate*
Solubility in water, 7: 344
- Magnesium succinate*
Solubility in water, 7: 344
- Sodium succinate*
Solubility in water, 7: 344
- Barium sulfate**
Adsorption of salts by, 1: 357
Albedo, 5: 262
Compressibility, 3: 50
Density, 1: 147; 3: 44
Dielectric constant, 6: 77, 100
Electrical conductivity, 6: 154
Aqueous solution, 6: 256
Emission, spectral, 5: 259
Heat of formation, 5: 198
Luminescence, 5: 389
Magnetic susceptibility, 6: 360
Reflectivity, selective, 5: 260
Refractive index, 1: 147, 171; 7: 26
Rubber, effect on, 2: 288
Solubility in water, 6: 256
Specific heat, 5: 99
Thermal conductivity, 5: 232
Thermal expansion, 3: 44
Transition temperature, 1: 147; 4: 7
X-ray diffraction data, 1: 345
See also Barite
- Aluminum chloride**
- Ammonium acetate**
- Ammonium chloride**
- Barium chloride**
- Calcium chloride*
Freezing point-solubility, 4: 63
- Ferric chloride*
Solubility in water, 7: 344
- Hydrochloric acid*
Solubility in water, 7: 344
- Lithium sulfate*
Freezing point-solubility, 4: 66
- Magnesium chloride*
Solubility in water, 7: 344
- Nitric acid*
Solubility in water, 7: 344
- Potassium carbonate*
Freezing point-solubility in water, 4: 334
- Potassium carbonate-Potassium sulfate*
Density, aqueous solution, 3: 100
- Potassium chloride*
Freezing point-solubility, 4: 66
- Potassium sulfate*
Freezing point-solubility, 4: 66
- Sodium chloride*
Freezing point-solubility, 4: 66
- Sodium sulfate*
Freezing point-solubility, 4: 66
- Sulfuric acid*
Freezing point-solubility, 4: 43; 7: 344
- Barium sulfide**
Heat of formation, 5: 198
Magnetic susceptibility, 6: 360

Barium sulfide.—(Continued)

- X-ray diffraction data, 1: 345
- Barium silicate**
- Barium sulfite**
Heat of formation, 5: 198
Solubility in water, 4: 232
- Barium sulfopropionate**
Solubility in water, 4: 233
- Barium tartrate**
Crystallography, 1: 322
Refractive index, 1: 148, 174
Solubility in water, 4: 232
- Acetic acid**
- Barium tetrathionate**
Heat of formation, 5: 198
- Barium thiocyanate**
Density, aqueous solution, 3: 76
Dielectric constant, 6: 77
Viscosity, aqueous solution, 5: 15
- Ethylamine*
Viscosity, 5: 29
- Barium thiosulfate**
Density, aqueous solution, 3: 76
Specific heat, 5: 99
- Barium trimethylacetate**
Solubility in water, 4: 233
- Barium valerate**
Solubility in water, 4: 233
- Barnett effect**, 6: 347
- Barometers**, corrections for, 1: 68
- Barometric pressure**
Altitude, relation of, 1: 71
- Barometry**, 1: 68
- Baros (alloy)**, 2: 372, 467
- Barrett effect**, 6: 439
- Barye**, definition of, 1: 34
- Barylite**
Density, 1: 148
Refractive index, 1: 148, 172; 7: 26
- Barysilite**
Density, 1: 117
Refractive index, 1: 117, 167
See also Lead orthodisilicate.
- Barytes**, rubber, use in, 2: 286
- Barytocalcite**
Density, 1: 148
Refractive index, 1: 148, 172
- Basalt**
Bulk density, 2: 52
Compressibility, 2: 54; 3: 51
Compressive strength, 2: 47
Dielectric constant, 6: 105
Hardness, 2: 50
Impact hardness, 2: 51
Porosity, 2: 53
Thermal conductivity, 2: 55, 315; 5: 217
Thermal diffusivity, 2: 56, 316
- Bassetite**
Density, 1: 145
Refractive index, 1: 145, 170
- Bastnäsite**
Density, 1: 139
Refractive index, 1: 139, 167
- Bath metal**, 2: 372; *cf.* 470, 475, 555
- Baudrin's alloy**, 2: 372
- Baumhauerite**, density, 1: 116
- Bauxite brick**
Crushing strength, 2: 83
Density, 2: 82
Electrical conductivity, 2: 86
Fusion temperature, 2: 83
Porosity, 2: 82
Temperature of failure under load, 2: 83
Thermal conductivity, 2: 85
Thermal expansion, 2: 83
- Bauxite clay**, fusion temperature, 2: 83
- Bavenite**
Density, 1: 146
Refractive index, 1: 146, 171
- Beacon alloy**
Electrical conductivity, 6: 196

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Beam of radiation**
Intensity, definition, 6: 11
- Bearing alloys, 2: 372**
Copper base
Frictional tests, 2: 562
Mechanical properties, 2: 561
Wear properties, 2: 562
Mechanical properties, 2: 557
Thermal conductivity, 5: 224
- Bearing bronzes**
Mechanical properties, 2: 562
- Beaverite**
Density, 1: 130
Refractive index, 1: 130, 167
- Bebeerine, optical rotatory power, 7: 475**
- β -Bibirine**
Optical rotatory power, 7: 476
- Beckelite, refractive index, 7: 25**
- Becket alloy, 2: 373**
- Beegerite, density, 1: 116**
- Beeswax**
Density, 2: 311
Dielectric constant, 2: 310
Dielectric strength, 2: 310
Electrical conductivity, 2: 211, 310
Sound, velocity of, in, 6: 465
Thermal conductivity, 2: 311
Thermal expansion, 2: 210
See also Waxes, animal.
- Behenic acid**
Cryoscopic constant, 4: 184
Heat of combustion, 5: 166
-*Brassicidic acid*
Freezing point-solubility, 4: 167
-*Erucic acid*
Freezing point-solubility, 4: 167
-*Isobehenic acid*
Freezing point-solubility, 4: 167
-*Isoerucic acid*
Freezing point-solubility, 4: 167
- Behenolic acid**
Absorption spectra, 5: 355
Heat of combustion, 5: 166
- Belgium, weights and measures, 1: 3**
- Bell brass, 2: 373; cf. 556**
- Bell metals, 2: 373, 559, 561**
- Bells, sound, source of, 6: 456**
- Bemal (alloy), 2: 373; cf. 469, 555**
- Bementite**
Density, 1: 128
Refractive index, 1: 128, 171
- Bend test, definition, 2: x**
- Benedict metal, 2: 373; cf. 480, 601**
- Benitoite**
Density, 1: 148
Refractive index, 1: 148, 167
- Bentonite, 2: 63**
- Benzal chloride**
Azeotropic mixtures, 3: 322
Dielectric constant, 6: 91
Magnetic susceptibility, 6: 362
Polarization of light scattered by, 5: 267
Surface tension, 4: 455
- Benzalacetone, Verdet constant, 6: 430**
- Benzalaniline**
Crystallization velocity, 5: 61
-*Anisylideneaniline**
-*Azobenzene**
-*Benzanilide*
Freezing point-solubility, 4: 162
-*Benzoin*
Freezing point-solubility, 4: 162
-*Benzylaniline*
Density, 3: 195
Freezing point-solubility, 4: 162
-*Dibenzyl*
Freezing point-solubility, 4: 162
-*Hydrazobenzene*
Freezing point-solubility, 4: 161
- Benzalaniline.—(Continued)**
-*Stilbene*
Density, 3: 195
Freezing point-solubility, 4: 162
-*Tolane*
Freezing point-solubility, 4: 162
- Benzalazine**
Magnetic susceptibility, 6: 363
-*Cinnamylideneaniline*
Freezing point-solubility, 4: 163
-*Dibenzylhydrazine*
Freezing point-solubility, 4: 163
-*Diphenylbutadiene*
Freezing point-solubility, 4: 163
-*Diphenyldiacetylene*
Freezing point-solubility, 4: 163
-*Furfuralazine*
Freezing point-solubility, 4: 156
- *α -Naphtholazine*
Freezing point-solubility, 4: 163
- Benzaldehyde**
Absorption spectra, 5: 332, 341, 372, 378
Azeotropic mixtures, 3: 322, 323
Birefringence, 7: 111
Boiling point, 3: 223
Density, 3: 29
Dielectric constant, 6: 91
Diffusion in benzene, 5: 74
Diffusion in methyl alcohol, 5: 73
Electrical conductivity, 6: 144
Flash point, 2: 161
Heat of vaporization, 5: 137
Magnetic susceptibility, 6: 362
Refractive index, 7: 40
Solubility in water, 3: 391
Specific heat, 5: 110
Surface tension, 4: 437, 455
Vapor pressure, 3: 223
Verdet constant, 6: 429
Viscosity, 5: 38; 7: 218
X-ray diffraction bands, 1: 352
-*Acetanilide**
-*Acetic acid**
-*Antimony tribromide**
-*Antimony trichloride**
-*Benzene*
Density, 3: 179
-*Caffeine*
Density, 3: 186
-*Carbon disulfide*
Density, 3: 145
-*Diethyl tartrate*
Density, 3: 186
-*Ethyl alcohol*
Density, aqueous solution, 3: 127
Miscibility in water, 3: 413
Viscosity, 5: 38
-*Formic acid*
Density, 3: 148
-*Glycerol*
Solubility, mutual, 3: 395
-*Magnesium bromide*
Freezing point-solubility, 4: 203
-*Magnesium iodide*
Freezing point-solubility, 4: 204
-*Methyl alcohol*
Vapor pressure, 3: 287
-*Phenaceline*
Density, 3: 186
-*Phosphorus trichloride*
Reaction kinetics, 7: 124
-*Potassium iodide*
Density, 3: 142
-*Quinoline*
Density, 7: 85
Refractive index, 7: 85
Dispersion, 7: 105
-*Tetrapropylammonium iodide*
Density, 3: 186
-*Trichloroacetic acid*
Freezing point-solubility, 4: 102
- Benzaldehyde phenylhydrazone**
Absorption spectra, 5: 349
Cryoscopic constant, 4: 184
-*Isoamyl acetate*
Viscosity, 5: 50
- Benzaldoxime**
Absorption spectra, 5: 341
Birefringence, magnetic, 7: 111
Dielectric constant, 6: 92
Magnetic susceptibility, 6: 362
-*Diethyl tartrate*
Density, 3: 187
-*Isoamyl acetate*
Viscosity, 5: 49
- α -Benzaldoxime**
Refractive index, 7: 40
Transition temperature, 4: 8
- *β -Benzaldoxime*
Freezing point-solubility, 4: 150
- Benzaldoxime *N*-methyl ether**
Absorption spectra, 5: 343
Surface tension, 4: 457
- Benzaldoxime *O*-methyl ether**
Absorption spectra, 5: 343
Refractive index, 7: 43
Surface tension, 4: 457
- β -Benzallevulinic acid**
Heat of combustion, 5: 166
- δ -Benzallevulinic acid**
Heat of combustion, 5: 166
- Benzalmalonic acid**
Electrical conductivity, aqueous solution, 6: 294
Heat of combustion, 5: 166
- Benzalpinacolin, surface tension, 4: 461**
- Benzamide**
Absorption spectra, 5: 341
Boiling point elevation in aqueous solution, 3: 327
Cryoscopic constant, 4: 183
Electrical conductivity, aqueous solution, 6: 280
Heat of combustion, 5: 168
Magnetic susceptibility, 6: 362
Solubility in salt solutions, 4: 418
Surface tension, 4: 456
Verdet constant, 6: 429
-*Acetic acid**
-*Acetic acid*-Acetic anhydride-Acetylbenzoylimide*
-*Acetic acid*-Acetic anhydride-Acetylbenzoylimide-Benzonitrile*
-*Acetic anhydride**
-*Acetone**
-*Benzene*
Boiling point elevation, 3: 344
-*Benzoic acid*
Freezing point-solubility, 4: 148
-*Benzoic anhydride*
Freezing point-solubility, 4: 150
-*Catechol*
Freezing point-solubility, 4: 137
-*Chloroform*
Boiling point elevation, 3: 331
-*1, 4-Dihydroxynaphthalene*
Freezing point-solubility, 4: 150
-*1, 5-Dihydroxynaphthalene*
Freezing point-solubility, 4: 150
-*1, 6-Dihydroxynaphthalene*
Freezing point-solubility, 4: 150
-*1, 8-Dihydroxynaphthalene*
Freezing point-solubility, 4: 150
-*2, 3-Dihydroxynaphthalene*
Freezing point-solubility, 4: 150
-*2, 6-Dihydroxynaphthalene*
Freezing point-solubility, 4: 150
-*2, 7-Dihydroxynaphthalene*
Freezing point-solubility, 4: 150

* Data for system will be found under this compound in Index. Full explanation on page vii.

Benzamide.—(Continued)*-Ethyl alcohol*Boiling point elevation, **3**: 336Density, **3**: 160Aqueous solution, **3**: 127Freezing point-solubility, **4**: 110Heat of solution, **5**: 152*-Hydroquinol*Freezing point-solubility, **4**: 139*Hydroxybenzoic acid (m-, p-)*Freezing point-solubility, **4**: 149*-Naphthol (α-, β-)*Freezing point-solubility, **4**: 150*-Nitrophenol (o-, m-, p-)*Freezing point-solubility, **4**: 129–131*-Nitrosodimethylaniline*Freezing point-solubility, **4**: 150*-Phenol*Density, aqueous solution, **3**: 129Freezing point-solubility, **4**: 136*-Pyridine*Density, **3**: 170Viscosity, **5**: 42*-Pyrogallol*Freezing point-solubility, **4**: 141*-Resorcinol*Freezing point-solubility, **4**: 138*-Salicylic acid*Freezing point-solubility, **4**: 149**Benzanilide**Absorption spectra, **5**: 349Heat of combustion, **5**: 168*-Acetic acid***-Acetone***-Aniline***-Benzalaniline***-Benzene*Boiling point elevation, **3**: 345*-Benzil*Freezing point-solubility, **4**: 162*-Benzoin*Freezing point-solubility, **4**: 162*-Butyric acid*Boiling point elevation, **3**: 340*-Chloroform*Boiling point elevation, **3**: 332*-Ethyl alcohol*Boiling point elevation, **3**: 337*-Formic acid*Boiling point elevation, **3**: 333*-Propionic acid*Boiling point elevation, **3**: 339*-Pyridine*Density, **3**: 172Viscosity, **5**: 42**Benzene**Absorption spectra, **5**: 332, 339Ultra-violet, **5**: 361–367, 371, 372, 375, 378Allotropic forms, **4**: 15Angle of contact, **4**: 434Azeotropic mixtures, **3**: 319–321, 323–324Birefringence, **7**: 111Boiling point, **3**: 221, 343Bromination, photochemical, **7**: 165Compressibility, **3**: 36, 39, 50Condensation on ions and nuclei, **6**: 117Critical point data, **3**: 244, 248Critical potentials, **6**: 72Cryoscopic constant, **4**: 183, 215Density, **3**: 29, 33Dielectric constant, **6**: 82, 90, 105Dielectric strength, **6**: 106Diffusion in methyl alcohol, **5**: 73Diffusion of vapor in gases, **5**: 62Electrical conductivity, **6**: 144X-rays, effect of, **6**: 6Emission, spectral, **5**: 257, 258Entropy, **5**: 89; **7**: 246Explosion in closed vessels, **2**: 191, 192**Benzene.**—(Continued)Faraday effect, lag in, **6**: 434Flash point, **2**: 161Free energy, **7**: 246Heat content, **5**: 89Heat of adiabatic expansion, **5**: 146Heat of adsorption on charcoal, **5**: 140Heat of combustion, **5**: 163Heat of fusion, **5**: 133Heat of hydrogenation, **7**: 246Heat of vaporization, **5**: 137, 138Heat of wetting by, **5**: 142Ignition temperature, **2**: 174Inflammability, limits of, **2**: 179Interfacial tension, **4**: 438Gas, variation with, **4**: 475Time, variation with, **4**: 474Internal pressure, **4**: 19Ionization of vapor by α-particles, **6**: 122Ionization of vapor by β-particles, **6**: 121Ions, mobility of, in, **6**: 111Magnetic susceptibility, **6**: 362Melting point, **4**: 6Melting point under pressure, **4**: 15Orthobaric density, **3**: 244Photoluminescence, **5**: 386Polarization of light reflected from, **5**: 261

Polarization of light scattered by

Gas, **5**: 266, 268Liquid, **5**: 267, 268

Refractive index

Gas, **7**: 10Liquid, **6**: 90; **7**: 12, 15, 38, 77Solubility in water, **3**: 389Solubility of salts in, **4**: 211Sound, velocity of, in vapor, **6**: 463, 464

Specific heat

Gas, **5**: 81Liquid, **5**: 86, 89, 115Saturated vapors, **5**: 83Solid, **5**: 86, 89, 103Surface tension, **4**: 436, 454

Thermal conductivity

Gas, **5**: 214, 215Liquid, **5**: 228Thermodynamic potential, **5**: 89Toxicology, **2**: 318

Vapor pressure

Liquid, **3**: 221Solid, **3**: 208Vapor pressure above 1 atm., **3**: 244Vapor pressure of water mixture, **3**: 363Verdet constant, **6**: 427Dispersion, **6**: 433

Viscosity

Gas, **5**: 4Liquid, **5**: 12, 27, 28Volume change on melting, **4**: 15X-ray diffraction bands, **1**: 352X-rays, absorption coefficient, **6**: 14, 16X-rays, scattered, distribution of, **6**: 18X-rays, scattering of, **6**: 17*-Acenaphthene***-Acetaldehyde***-Acetanilide***-Acetic acid***-Acetic acid*-Ethyl iodide**-Acetone***-Acetone*-Benzophenone**-Acetone*-Chloroform**-Acetone*-Ethyl ether**-Acetone*-Toluene**-Acetophenone***-Acetophenone oxime***-o-Acetotoluide****Benzene.**—(Continued)*-Aldehydobenzoic acid (o-, m-, p-)***-1-Aldehydo-2-hydroxy-5-methylbenzene***-1-Aldehydo-4-hydroxy-5-methylbenzene***-1-Aldehydo-4-hydroxy-6-methylbenzene***-Allyl alcohol***-Aluminum bromide***-Aluminum chloride***-Aminoazobenzene***-o-Aminobenzoic acid***-Aminophenol (o-, m-, p-)***-Ammonia***-Amyl alcohol***-Amyl benzoate***-Amyl formate***-Amyl valerate***-Amylene***-Anethole***-Aniline***-Aniline*-m-Cresol**-p-Anisidine***-Anisole***-Anthracene***-Anthracene picrate***-Anthraquinone***-Antimony tribromide***-Antimony trichloride***-Azobenzene***-p-Azoxyanisole***-Benzaldehyde***-Benzamide***-Benzanilide***-Benzhydrol*Freezing point-solubility, **4**: 134*-Benzil*Boiling point elevation, **3**: 345Density, **3**: 181Freezing point-solubility, **4**: 134*-β-Benzilmonoxime*Boiling point elevation, **3**: 345*-Benzoic acid*Boiling point elevation, **3**: 344Density, **3**: 179Distribution coefficients in water, **3**: 429Freezing point-solubility, **4**: 133Heat of solution, **5**: 154*-Benzoic anhydride*Boiling point elevation, **3**: 345*-Benzophenone*Boiling point elevation, **3**: 345Density, **3**: 181*-Benzoyl chloride*Freezing point-solubility, **4**: 177*-Benzyl alcohol*Density, **3**: 179*-Benzyl benzoate*Density, **3**: 181Viscosity, **5**: 46*-Borneol*Boiling point elevation, **3**: 345Density, **7**: 84Refractive index, **7**: 84*-Bromoaniline (m-, p-)*Distribution coefficients in water, **3**: 428*-Bromobenzene*Density, **3**: 174Dielectric constant, **6**: 103Heat of solution, **5**: 157Vapor pressure, **3**: 289Viscosity, **5**: 43*-o-Bromobenzoic acid*Boiling point elevation, **3**: 344*-Bromocamphor*Density, **3**: 180; **7**: 84Refractive index, **7**: 84*-Bromoforn*Density, **3**: 146Freezing point-solubility, **4**: 172Viscosity, **5**: 32

* Data for system will be found under this compound in Index. Full explanation on page vii.

Benzene.—(Continued)

- Bromoform-Iodoform
Density, **3**: 197
- Bromonitrobenzene (*o*-, *m*-, *p*-)
Freezing point-solubility, **4**: 175
- p*-Bromotoluene
Freezing point-solubility, **4**: 177
- Butane
Vapor pressure, **3**: 289
- Butyl acetate
Density, **3**: 179
- Butyl alcohol
Density, **3**: 167
Miscibility in water, **3**: 410
- Butyramide
Boiling point elevation, **3**: 344
- Butyric acid
Density, **3**: 166
Distribution coefficients in water, **3**: 426
Vapor pressure, **3**: 289
- Caffeine
Density, **3**: 180
- Camphene
Freezing point-solubility, **4**: 177
- Camphor
Boiling point elevation, **3**: 345
Density, **3**: 180; **7**: 84
Dielectric constant, **6**: 103
Freezing point-solubility, **4**: 134
Refractive index, **7**: 84
- Camphor-Ethyl acetate
Density, **3**: 197
- Camphorcarboxylic acid
Boiling point elevation, **3**: 345
- Camphoric acid
Density, **3**: 180
- Capryl alcohol
Density, **3**: 180
- Carbazole
Freezing point-solubility, **4**: 134
- Carbon disulfide
Boiling point, **3**: 312
Density, **3**: 145
Dielectric constant, **6**: 101
Freezing point-solubility, **4**: 98
Heat of solution, **5**: 151, 155, 158
Surface tension, **4**: 471
Vapor pressure, partial, **3**: 286
Viscosity, **5**: 32
- Carbon tetrachloride
Birefringence, electric, **7**: 112
Boiling point, **3**: 312
Compressibility, **3**: 440
Density, **3**: 144
Dielectric constant, **6**: 101
Freezing point-solubility, **4**: 98
Heat of solution, **5**: 151, 155, 157
Magnetic rotatory power, **6**: 432
Refractive index, **7**: 77
Dispersion, **7**: 102
Specific heat, **5**: 125
Surface tension, **4**: 471
Vapor pressure, partial, **3**: 285
Viscosity, **5**: 32
- Carbon tetrachloride-Ethyl alcohol
Vapor pressure, **3**: 375
- Carbon tetrachloride-Iodine
Freezing point-solubility, **4**: 268
- Castor oil
Dielectric constant, **6**: 103
- Catechol
Boiling point elevation, **3**: 344
- Cetyl palmitate
Boiling point elevation, **3**: 345
- Chloral hydrate
Distribution coefficients in water, **3**: 423
Freezing point-solubility in water, **4**: 402
- Chloroacetamide
Boiling point elevation, **3**: 344

Benzene.—(Continued)

- Chloroacetanilide (*o*-, *m*-, *p*-)
Freezing point-solubility, **4**: 133
- Chloroacetic acid
Boiling point elevation, **3**: 344
Density, **3**: 154
Distribution coefficients in water, **3**: 423
Freezing point-solubility, **4**: 105
- o*-Chloroaniline
Freezing point-solubility, **4**: 132
- m*-Chloroaniline
Distribution coefficients in water, **3**: 428
Freezing point-solubility, **4**: 132
- p*-Chloroaniline
Distribution coefficients in water, **3**: 428
Freezing point-solubility, **4**: 132
- Chlorobenzene
Density, **3**: 174
Heat of solution, **5**: 154
Surface tension, **4**: 473
Viscosity, **5**: 43
- Chlorobenzene-Ethyl propionate-Toluene
Surface tension, **4**: 474
- Chlorobenzene-Toluene
Surface tension, **4**: 474
- Chlorobenzoic acid (*o*-, *m*-, *p*-)
Freezing point-solubility, **4**: 133
- Chloroform
Boiling point, **3**: 312
Density, **3**: 147
Dielectric constant, **6**: 102
Freezing point-solubility, **4**: 99
Heat of solution, **5**: 151, 155, 158
Specific heat, **5**: 126
Surface tension, **4**: 471
Vapor pressure, **3**: 286
Viscosity, **5**: 33
- Chloroform-Iodine
Freezing point-solubility, **4**: 268
- Chloronitrobenzene (*o*-, *m*-, *p*-)
Freezing point-solubility, **4**: 175
- Chlorophenol (*o*-, *m*-, *p*-)
Freezing point-solubility data, **4**: 128
- Cholestane
Density, **7**: 85
Refractive index, **7**: 85
Dispersion, **7**: 104
- Cholestene
Density, **7**: 84
Refractive index, **7**: 84
Dispersion, **7**: 104
- Cholesterol
Density, **7**: 85
Refractive index, **7**: 85
Dispersion, **7**: 104
- α -Cholesterylène
Density, **7**: 84
Refractive index, **7**: 84
Dispersion, **7**: 104
- Cresol
Vapor pressure, **3**: 289
- o*-Cresol
Density, **3**: 179
Dielectric constant, **6**: 103
- m*-Cresol
Density, **3**: 179
Dielectric constant, **6**: 103
Heat of solution, **5**: 157
Specific heat, **5**: 128
Surface tension, **4**: 473
Viscosity, **5**: 46
- m*-Cresol-Dimethylaniline
Viscosity, **5**: 51
- p*-Cresol
Dielectric constant, **6**: 103
- Cyanoacetic acid
Distribution coefficients in water, **3**: 425

Benzene.—(Continued)

- Cyclohexane
Freezing point-solubility, **4**: 133
Heat of solution, **5**: 157
Viscosity, **5**: 46
- Cyclohexanone
Vapor pressure, **3**: 289
- Diallyl oxalate
Density, **3**: 180
- Dibenzylpiperazine
Density, **7**: 84
Refractive index, **7**: 84
- p*-Dibromobenzene
Density, **3**: 173
Freezing point-solubility, **4**: 175
- 1, 2-Dibromoethane
Boiling point elevation, **3**: 344
- Dibromoethylene
Density, **3**: 153
- 1, 2-Dibromopropionic acid
Boiling point elevation, **3**: 344
- Dichloroacetic acid
Density, **3**: 153
Distribution coefficients in water, **3**: 423
- Dichlorobenzene (*o*-, *m*-)
Birefringence, electric, **7**: 112
- Dichloronaphthalene
Density, **3**: 180
- Diethyl malate
Boiling point elevation, **3**: 344
- Diethyl malonate
Density, **3**: 179
- Diethyl monobenzoyletartrate
Density, **3**: 181
- Diethyl oxalate
Density, **3**: 179
- Diethyl succinate
Density, **3**: 180
- Diethyl tartrate
Boiling point elevation, **3**: 344
Density, **3**: 180
Distribution coefficients in water, **3**: 431
- Diethylamine
Distribution coefficients in water, **3**: 427
Freezing point-solubility, **4**: 116
- Diethylisopropyl alcohol
Density, **3**: 179
- Diisobutylammonium dichloroacetate
Boiling point elevation, **3**: 345
- Di-*l*-menthyl tartrate
Density, **3**: 181
- Dimethyl acetylmaleate
Boiling point elevation, **3**: 344
Density, **3**: 180
- Dimethyl malate
Boiling point elevation, **3**: 344
- Dimethyl tartrate
Boiling point elevation, **3**: 344
- Dimethylaniline
Boiling point elevation, **3**: 344
Vapor pressure, **3**: 289
- Dimethylpyrone picrate
Boiling point elevation, **3**: 345
- Dimethyl-*o*-toluidine
Density, **3**: 180
Surface tension, **4**: 473
- o*-Dinitrobenzene
Freezing point-solubility, **4**: 175
- m*-Dinitrobenzene
Density, **3**: 174
Freezing point-solubility, **4**: 176
Heat of solution, **5**: 154
Vapor pressure, **3**: 361
- p*-Dinitrobenzene
Freezing point-solubility, **4**: 125
- 3, 5-Dinitrobenzoic acid
Distribution coefficients in water, **3**: 429
- 2, 3-Dinitrophenol
Freezing point-solubility, **4**: 126

Benzene.—(Continued)

- 2, 4-Dinitrophenol
Freezing point-solubility, 4: 126
- 2, 5-Dinitrophenol
Freezing point-solubility, 4: 127
- 2, 6-Dinitrophenol
Freezing point-solubility, 4: 127
- 3, 4-Dinitrophenol
Freezing point-solubility, 4: 127
- 2, 4-Dinitrotoluene
Freezing point-solubility, 4: 177
- 2, 6-Dinitrotoluene
Freezing point-solubility, 4: 177
- 3, 4-Dinitrotoluene
Freezing point-solubility, 4: 177
- Diphenyl
Boiling point elevation, 3: 345
Density, 3: 181
Freezing point-solubility, 4: 177
Heat of solution, 5: 154
Viscosity, 5: 46
- Diphenylamine
Boiling point elevation, 3: 345
Freezing point-solubility, 4: 177
Heat of solution, 5: 154
- Diphenylarsenic acid
Boiling point elevation, 3: 345
- sym.-Diphenyldimethylethylenediamine
Density, 7: 84
Refractive index, 7: 84
- Diphenylpiperazine
Density, 7: 84
Refractive index, 7: 84
- Dipropyl tartrate
Density, 3: 180
- Durene
Density, 3: 180
- Epichlorohydrin
Boiling point elevation, 3: 344
- Erucic acid
Heat of solution, 5: 154
- Ethyl acetate
Density, 3: 166
Dielectric constant, 6: 102
Distribution coefficients in water, 3: 426
Heat of solution, 5: 153, 156, 158
Surface tension, 4: 472
Vapor pressure, 3: 289
Viscosity, 5: 40
- Ethyl acetoacetate
Density, 3: 179
Viscosity, 5: 46
- Ethyl alcohol
Boiling point, 3: 313
Aqueous solution, 3: 316
Compressibility, 3: 440
Density, 3: 160
Aqueous solution, 3: 127; 7: 93
Dielectric constant, 6: 102
Distribution coefficients in water, 3: 401, 424
Freezing point-solubility in water, 4: 404
Heat of solution, 5: 152, 156, 158, 159
Refractive index, 7: 81
Aqueous solution, 7: 93
Solubility in water, 3: 404
Specific heat, 5: 116, 126
Surface tension, 4: 472
Aqueous solution, 4: 470
Vapor pressure, 3: 360
Aqueous solution, 3: 377
Viscosity, 5: 38
- Ethyl benzoate
Boiling point elevation, 3: 344
Density, 3: 180
Viscosity, 5: 46
- Ethyl bromide
Boiling point, 3: 313
- Ethyl butyrate
Density, 3: 179

Benzene.—(Continued)

- Ethyl chloroacetate
Density, 3: 165
- Ethyl l-diacetylgllycerate
Density, 3: 180
- Ethyl diethylacetoacetate
Density, 3: 180
Viscosity, 5: 46
- Ethyl ether
Boiling point, 3: 313
Density, 3: 168
Dielectric constant, 6: 102
Freezing point-solubility, 4: 116
Heat of solution, 5: 153, 158
Specific heat, 5: 116, 127
Surface tension, 4: 473
Vapor pressure, 3: 289
Viscosity, 5: 41
- Ethyl ether-Iodine
Freezing point-solubility, 4: 268
- Ethyl ethylacetoacetate
Density, 3: 180
Viscosity, 5: 46
- Ethyl formate
Density, 3: 164
- Ethyl iodide
Boiling point elevation, 3: 344
Density, 3: 158
Surface tension, 4: 472
- Ethyl iodide-Methyl iodide
Density, 3: 197
- Ethyl lactate-Methyl propionate-Toluene
Surface tension, 4: 474
- Ethyl monobenzoylglycerate
Density, 3: 181
- Ethyl oleate
Density, 3: 181
- Ethyl propionate
Density, 3: 172
Surface tension, 4: 473
- Ethyl propionate-Toluene
Surface tension, 4: 474
- Ethyl salicylate
Density, 3: 180
- Ethyl trichloroacetate
Density, 3: 165
- Ethyl valerate
Density, 3: 179
- Ethylacetanilide
Boiling point elevation, 3: 345
- Ethylbenzene
Density, 3: 180
- Ethylene bromide
Density, 3: 155
Dielectric constant, 6: 102
Freezing point-solubility, 4: 173
Heat of solution, 5: 156
- Ethylene chloride
Birefringence, electric, 7: 112
Boiling point, 3: 313
Compressibility, 3: 440
Density, 3: 155
Freezing point-solubility, 4: 173
Heat of solution, 5: 156
Magnetic rotatory power, 6: 432
Refractive index, 7: 80
Specific heat, 5: 126
Surface tension, 4: 472
Vapor pressure, 3: 287
Viscosity, 5: 36
- Ethylresodiacetophenone
Boiling point elevation, 3: 345
- Fluorene
Freezing point-solubility, 4: 177
- Fluorobenzene
Density, 3: 176
Viscosity, 5: 44
- Formanilide
Boiling point elevation, 3: 344
- Formic acid
Distribution coefficients in water, 3: 422
Miscibility in water, 3: 410
Solubility, mutual, 3: 395, 397

Benzene.—(Continued)

- Fumaric acid
Freezing point-solubility, 4: 112
- Gallic acid
Density, 3: 179
- Glycolanilide
Boiling point elevation, 3: 344
- Heptane
Density, 3: 179; 7: 84
Heat of solution, 5: 154
Refractive index, 7: 84
Dispersion, 7: 104
- Hexahydroresols
Vapor pressure, 3: 289
- Hexahydrophenol
Vapor pressure, 3: 289
- Hexane
Density, 3: 179
Heat of solution, 5: 157
- Hexoic acid
Distribution coefficients in water, 3: 428
- Hydrazine
Distribution coefficients in water, 3: 421
- Hydrazoanisole
Freezing point-solubility, 4: 178
- Hydrazobenzene
Freezing point-solubility, 4: 177
- Hydrazotoluene
Freezing point-solubility, 4: 178
- Hydrogen
Equilibrium constant of reaction, 7: 246
- Hydrogen bromide
Freezing point-solubility, 4: 187
- Hydrogen chloride
Distribution coefficients in water, 3: 419
- Hydrogen cyanide
Distribution coefficients in water, 3: 422
- Hydrogen peroxide
Distribution coefficients in water, 3: 419
- Hydrogen sulfide
Distribution coefficients in water, 3: 420
- Hydroxybenzaldehyde (o-, m-, p-)
Freezing point-solubility, 4: 133
- Hydroxybenzoic acid (m-, p-)
Freezing point-solubility, 4: 133
- 8-Hydroxyquinoline
Distribution coefficients in water, 3: 431
- Iodine
Boiling point elevation, 3: 343
Density, 3: 132
Freezing point lowering, 4: 37
Freezing point-solubility, 4: 34
Viscosity, 5: 27
- Iodine-Iodides
Freezing point-solubility, 4: 270
- Iodine-Methylene iodide
Density, 3: 132
- Iodobenzene
Density, 3: 176
Viscosity, 5: 45
- Iodoform-Methylene iodide
Density, 3: 197
- Isoamyl acetate
Density, 3: 179
- Isoamyl alcohol
Density, 3: 173
Heat of solution, 5: 154
Viscosity, 5: 43
- Isobutyl alcohol
Density, 3: 167
Heat of solution, 5: 153
- Isobutyl chloride
Heat of solution, 5: 153
- Isobutylacetamide
Boiling point elevation, 3: 344

Benzene.—(Continued)

- Isobutyramide*
Boiling point elevation, **3**: 344
- Isobutyric acid*
Density, **3**: 166
Distribution coefficients in water, **3**: 426
- Isopropyl iodide*
Boiling point elevation, **3**: 344
- Isovaleric acid*
Distribution coefficients in water, **3**: 427
- Lactanilide*
Boiling point elevation, **3**: 344
- Lauric acid*
Heat of solution, **5**: 154
- Maleic acid*
Freezing point-solubility, **4**: 113
- Mandelic acid*
Boiling point elevation, **3**: 344
Distribution coefficients in water, **3**: 431
- Menthol*
Density, **3**: 180
Dielectric constant, **6**: 103
Freezing point-solubility, **4**: 134
Heat of solution, **5**: 154
- Menthyl benzenesulfonate*
Density, **3**: 181
- l-Menthyl diacetyltartrate*
Density, **3**: 181
- Menthyl naphthalene- β -sulfonate*
Density, **3**: 181
- Mercuric bromide*
Distribution coefficients in water, **3**: 421
- Mercuric chloride*
Distribution coefficients in water, **3**: 421
Freezing point-solubility, **4**: 199
- Mercuric iodide*
Distribution coefficients in potassium iodide solution, **3**: 421
- Methyl acetate*
Density, **3**: 164
Heat of solution, **5**: 158
Vapor pressure, **3**: 289
- Methyl alcohol*
Density, **3**: 151
Aqueous solution, **3**: 125
Dielectric constant, **6**: 102
Freezing point-solubility, **4**: 100
Heat of solution, **5**: 151, 158
Miscibility in water, **3**: 410
Refractive index, **7**: 79
Aqueous solution, **7**: 92
Surface tension, **4**: 471
Vapor pressure, **3**: 287
Viscosity, **5**: 34
- Methyl benzoate*
Density, **3**: 179
- Methyl butyrate*
Density, **3**: 172
Surface tension, **4**: 473
- Methyl butyrate-Methyl propionate-Toluene*
Surface tension, **4**: 474
- Methyl butyrate-Propyl acetate-Toluene*
Surface tension, **4**: 474
- Methyl camphorcarboxylate*
Boiling point elevation, **3**: 345
- Methyl d-dibenzoylglycerate*
Density, **3**: 181
- Methyl formate*
Density, **3**: 157
- Methyl iodide*
Density, **3**: 149
- Methyl propionate*
Density, **3**: 167
- Methyl propionate-Toluene*
Surface tension, **4**: 474
- Methyl tolyl ether (o-, m-, p-)*
Dielectric constant, **6**: 103

Benzene.—(Continued)

- Methylacetanilide*
Boiling point elevation, **3**: 344
Density, **3**: 180
- Methylene chloride*
Birefringence, electric, **7**: 112
- Methylene iodide*
Density, **3**: 148
- o-Methoxy-p-methylacetophenone*
Boiling point elevation, **3**: 345
- Monoacetyl-o-phenylenediamine*
Freezing point-solubility, **4**: 134
- Monoacetyl-m-phenylenediamine*
Freezing point-solubility, **4**: 134
Solubility, mutual, **3**: 396
- Monoacetyl-p-phenylenediamine*
Freezing point-solubility, **4**: 134
Solubility, mutual, **3**: 396
- Myristic acid*
Boiling point elevation, **3**: 345
Heat of solution, **5**: 154
- Naphthalene*
Boiling point elevation, **3**: 345
Density, **3**: 180
Freezing point-solubility, **4**: 177
Heat of solution, **5**: 154
Vapor pressure lowering, **3**: 300
Viscosity, **5**: 46
- Naphthalene-Trinitrotoluene*
Density, **3**: 197
- Naphthalene picrate*
Boiling point elevation, **3**: 345
Density, **3**: 181
Freezing point-solubility, **4**: 134
- *β -Naphthol*
Boiling point elevation, **3**: 345
Distribution coefficients in water, **3**: 432
Freezing point-solubility, **4**: 134
- *β -Naphthol picrate*
Boiling point elevation, **3**: 345
- Naphthylamine (α -, β -)*
Distribution coefficients in water, **3**: 432
Freezing point-solubility, **4**: 134
- Nicotine*
Density, **3**: 180
Freezing point-solubility, **4**: 134
- Nitroacetanilide (o-, m-, p-)*
Freezing point-solubility, **4**: 134
- o-Nitroaniline*
Distribution coefficients in water, **3**: 428
Freezing point-solubility, **4**: 132
- m-Nitroaniline*
Boiling point elevation, **3**: 344
Distribution coefficients in water, **3**: 428
Freezing point-solubility, **4**: 132
- p-Nitroaniline*
Distribution coefficients in water, **3**: 428
Freezing point-solubility, **4**: 132
- Nitrobenzaldehyde (o-, m-, p-)*
Freezing point-solubility data, **4**: 133
- Nitrobenzene*
Birefringence, electric, **7**: 112
Compressibility, **3**: 440
Density, **3**: 176
Dielectric constant, **6**: 103
Freezing point-solubility, **4**: 176
Specific heat, **5**: 128
Surface tension, **4**: 473
Vapor pressure, **3**: 289
Viscosity, **5**: 45
- o-Nitrobenzoic acid*
Distribution coefficients in water, **3**: 429
Freezing point-solubility, **4**: 133
- m-Nitrobenzoic acid*
Distribution coefficients in water, **3**: 429
Freezing point-solubility, **4**: 133

Benzene.—(Continued)

- p-Nitrobenzoic acid*
Freezing point-solubility, **4**: 133
- Nitrobenzyl chloride*
Freezing point-solubility, **4**: 177
- Nitrogen sulfide*
Boiling point elevation, **3**: 344
- *α -Nitronaphthalene*
Boiling point elevation, **3**: 344
Density, **3**: 180
Heat of solution, **5**: 154
- o-Nitrophenol*
Density, **3**: 178
Freezing point-solubility, **4**: 129
Heat of solution, **5**: 154
- m-Nitrophenol*
Freezing point-solubility, **4**: 130
- p-Nitrophenol*
Boiling point elevation, **3**: 344
Freezing point-solubility, **4**: 131
- p-Nitrosodimethylaniline*
Distribution coefficients in water, **3**: 431
- p-Nitrosomethylaniline*
Distribution coefficients in water, **3**: 430
- Nitrotoluene*
Surface tension, **4**: 473
- m-Nitrotoluene*
Birefringence, electric, **7**: 112
Density, **7**: 84
Refractive index, **7**: 84
Dispersion, **7**: 104
- Octane*
Heat of solution, **5**: 154
- *β -Octanol*
Density, **7**: 84
Refractive index, **7**: 84
Dispersion, **7**: 104
- d- β -Octyl acetate*
Density, **3**: 180
- l- β -Octyl acetate*
Density, **7**: 84
Refractive index, **7**: 84
Dispersion, **7**: 104
- Octyl hydrogen phthalate*
Density, **3**: 181
- sec-Octyl hydrogen phthalate*
Viscosity, **5**: 47
- Oleates*
Dielectric constant, **6**: 104
- Palmitic acid*
Density, **3**: 181
Heat of solution, **5**: 154
- Paraldehyde*
Density, **3**: 179
Freezing point-solubility, **4**: 177
Viscosity, **5**: 46
- Pentabromoresorcinol*
Boiling point elevation, **3**: 344
- Pentachloroethane*
Vapor pressure, **3**: 287
- Phenacetine*
Density, **3**: 180
- Phenanthraquinone*
Density, **3**: 181
- Phenanthrene*
Boiling point elevation, **3**: 345
Density, **3**: 181
Freezing point-solubility, **4**: 178
- Phenol*
Boiling point elevation, **3**: 344
Density, **3**: 179
Dielectric constant, **6**: 103
Distribution coefficients in water, **3**: 428
Freezing point-solubility, **4**: 177
Freezing point-solubility in water, **4**: 416
Heat of solution, **5**: 154
Miscibility in water, **3**: 410
Surface tension, **4**: 473
Viscosity, **5**: 46

Benzene.—(Continued)*-Phenolphthalein*Distribution coefficients in water, **3**: 432*-Phenyl benzoate*Boiling point elevation, **3**: 345*-Phenyl salicylate*Boiling point elevation, **3**: 345Density, **3**: 181*-Phenylacetic acid*Boiling point elevation, **3**: 344*-o-Phenylenediamine*Distribution coefficients in water, **3**: 428Freezing point-solubility, **4**: 132*-m-Phenylenediamine*Distribution coefficients in water, **3**: 428Freezing point-solubility, **4**: 132Solubility, mutual, **3**: 396*-p-Phenylenediamine*Freezing point-solubility, **4**: 132*-Phenylurethan*Boiling point elevation, **3**: 344*-Phorone*Density, **3**: 180*-Phosphorus*Density, **3**: 132Freezing point-solubility, **4**: 36*-Phosphorus oxybromide*Boiling point elevation, **3**: 344*-Phosphorus oxychloride*Boiling point elevation, **3**: 344*-Phosphorus sesquisulfide*Freezing point-solubility, **4**: 190*-Phosphorus sulfochloride*Boiling point elevation, **3**: 344*-Phosphorus trichloride*Boiling point elevation, **3**: 344Density, **3**: 136*-Picric acid*Boiling point elevation, **3**: 344Density, **3**: 173Distribution coefficients in water, **3**: 427Freezing point-solubility, **4**: 119*-Pinene*Heat of solution, **5**: 157*-Piperidine*Density, **3**: 173Distribution coefficients in water, **3**: 427Refractive index, **7**: 83*-Propionamide*Boiling point elevation, **3**: 344Density, **3**: 164*-Propionic acid*Density, **3**: 164Distribution coefficients in water, **3**: 425Miscibility in water, **3**: 410*-Propyl acetate*Surface tension, **4**: 473*-Propyl alcohol*Density, **3**: 164Dielectric constant, **6**: 102Freezing point-solubility, **4**: 112Heat of solution, **5**: 153, 158Vapor pressure, **3**: 289Viscosity, **5**: 40*-Propyl benzyl ketone*Boiling point elevation, **3**: 345*-Propyl butyrate*Density, **3**: 179*Pyridine*Density, **3**: 170Distribution coefficients in water, **3**: 427Freezing point-solubility, **4**: 174Heat of solution, **5**: 153Miscibility in water, **3**: 417**Benzene.—(Continued)***-Pyridine acetate*Heat of solution, **5**: 154*-Quinine*Freezing point-solubility, **4**: 135Vapor pressure, **3**: 361*-Quinoline*Birefringence, electric, **7**: 112Viscosity, **5**: 46*-Resorcinol*Boiling point elevation, **3**: 344Distribution coefficients in water, **3**: 428Heat of solution, **5**: 154Solubility, mutual, **3**: 396, 397*-Salicylaldehyde*Vapor pressure, **3**: 289*-Salicylamide*Boiling point elevation, **3**: 344*-Salicylic acid*Boiling point elevation, **3**: 344Density, **3**: 179Distribution coefficients in water, **3**: 430Freezing point-solubility, **4**: 133Heat of solution, **5**: 154*-Silver perchlorate*Density, **3**: 139Aqueous solution, **3**: 102; **4**: 416Distribution coefficients in water, **3**: 421Freezing point-solubility, **4**: 200, 416Miscibility in water, **3**: 409*-Stannic chloride*Density, **3**: 138Vapor pressure, **3**: 285Viscosity, **5**: 28*-Stannic iodide*Boiling point elevation, **3**: 345*-Stearic acid*Density, **3**: 181*-Sulfonal*Boiling point elevation, **3**: 344*-Sulfur*Boiling point elevation, **3**: 344Freezing point-solubility, **4**: 35Solubility, mutual, **3**: 394*-Sulfur dioxide*Density, **3**: 135Viscosity, **5**: 27*-Sulfur monochloride*Boiling point elevation, **3**: 344*-Tartaric acid*Density, **3**: 165*-Terpine hydrochloride*Density, **3**: 180*-1, 1, 2, 2-Tetrabromoethane*Birefringence, electric, **7**: 112Boiling point elevation, **3**: 344*-Tetrahydronaphthalene*Vapor pressure, **3**: 289Viscosity, **5**: 46*-Tetramethyldiaminobenzhydrol*Freezing point-solubility, **4**: 135*-Tetraphenylcacodyl*Boiling point elevation, **3**: 345*-Thiophene*Freezing point-solubility, **4**: 113*-Thymol*Density, **3**: 180Heat of solution, **5**: 154*-Toluene*Boiling point, **3**: 314Density, **3**: 179Dielectric constant, **6**: 103Freezing point-solubility, **4**: 177Heat of solution, **5**: 157, 159Specific heat, **5**: 128Surface tension, **4**: 473Vapor pressure, **3**: 289Viscosity, **5**: 46**Benzene.—(Continued)***-Toluene-Water*Boiling point, **3**: 317*-m-Toluidine*Birefringence, electric, **7**: 112Density, **7**: 84Distribution coefficients in water, **3**: 430Refractive index, **7**: 84Dispersion, **7**: 104*-p-Toluidine chloroacetate*Boiling point elevation, **3**: 344*-p-Toluidine salicylate*Boiling point elevation, **3**: 345*-Triamylammonium picrate*Boiling point elevation, **3**: 345*-Triamylammonium thiocyanate*Boiling point elevation, **3**: 345*-Trichloroacetamide*Boiling point elevation, **3**: 344*-Trichloroacetic acid*Distribution coefficients in water, **3**: 423Freezing point-solubility, **4**: 102*-Trichlorobutyric acid*Distribution coefficients in water, **3**: 426*-Trichlorolactamide*Boiling point elevation, **3**: 344*-Trimethylamine*Distribution coefficients in water, **3**: 425*-1, 2, 4-Trimethylbenzene*Density, **3**: 180*-Trinitrotoluene*Density, **3**: 179*-Tripalmitin*Density, **3**: 181Surface tension, **4**: 474*-Triphenylcarbinol*Boiling point elevation, **3**: 345*-Triphenylmethane*Boiling point elevation, **3**: 345Density, **3**: 181Freezing point-solubility, **4**: 135Heat of solution, **5**: 154*-Triphenylmethyl*Boiling point elevation, **3**: 345*-Tristearin*Boiling point elevation, **3**: 345Density, **3**: 181Surface tension, **4**: 474*-Turpentine*Density, **3**: 182*-Urethan*Boiling point elevation, **3**: 344Density, **3**: 164Freezing point-solubility, **4**: 112*-Valeramide*Boiling point elevation, **3**: 344*-Valeric acid*Distribution coefficients in water, **3**: 427*-m-Xylene*Density, **3**: 180Heat of solution, **5**: 157Specific heat, **5**: 128Surface tension, **4**: 473*-p-Xylene*Freezing point-solubility, **4**: 177**Benzene hexachloride**Cryoscopic constant, **4**: 183*-Cyclohexane*Boiling point elevation, **3**: 345**Benzeneazobenzene***-Azobenzene****Benzeneazo- β -naphthol**Absorption spectra, **5**: 351Magnetic susceptibility, **6**: 364*m-Benzenedisulfonyl chloride**-p-Benzenedisulfonyl chloride*Freezing point-solubility, **4**: 175

* Data for system will be found under this compound in Index. Full explanation on page vii.

m-Benzenedisulfonyl chloride.—(Continued)

-Sulfobenzoic acid sym.-chloride (*m*-, *p*-)
Freezing point-solubility, 4: 168

p-Benzenedisulfonyl chloride

-Sulfobenzoic acid sym.-chloride (*m*-, *p*-)
Freezing point-solubility, 4: 168

Benzenepentacarboxylic acid

Crystallography, 1: 331
Density, aqueous solution, 3: 112

Benzenesulfone chloride

Birefringence, electric, 7: 111
-Aluminum bromide*-Carbon disulfide
-Carbon disulfide
Boiling point elevation, 3: 330

Benzenesulfonic acid

Absorption spectra, 5: 339
Electrical conductivity, aqueous solution, 6: 273
Heat of solution in water, 5: 149
-Antimony tribromide*
-Antimony trichloride*
-Methyl alcohol
Density, 7: 79
Refractive index, 7: 79

Benzhydrol

Surface tension, 4: 461
-Benzene*
-Catechol
Freezing point-solubility, 4: 138
-Dimethylaniline
Freezing point-solubility, 4: 180
-2, 4-Dinitrophenol
Freezing point-solubility, 4: 126
-Hydroquinol
Freezing point-solubility, 4: 140
-Naphthylamine (α -, β -)
Freezing point-solubility, 4: 158
-Naphthol (α -, β -)
Freezing point-solubility, 4: 156, 157
-Nitrophenol (*o*-, *m*-, *p*-)
Freezing point-solubility, 4: 131
-Phenylenediamine (*o*-, *p*-)
Freezing point-solubility, 4: 143, 144
-Phenol
Freezing point-solubility, 4: 137
-Picric acid
Freezing point-solubility, 4: 121
-Pyrogallol
Freezing point-solubility, 4: 141
-Resorcinol
Freezing point-solubility, 4: 139

Benzidine

Absorption spectra, 5: 348
Diffusion of vapor in air, 5: 63
Heat of combustion, 5: 168
-Nitrobenzene
Boiling point elevation, 3: 343

Benzidine hydrochlorides

Heat of solution in water, 5: 150

Benzidine sulfate

Solubility in water, 4: 219

Benzil

Absorption spectra, 5: 350, 378
Cryoscopic constant, 4: 184
Crystallization velocity, 5: 61
Crystallography, 1: 333
Dielectric constant, 6: 96
Heat of fusion, 5: 134
Optical rotatory power, 7: 354
Piezoelectric constant, 6: 210
Surface tension, 4: 461
-Acenaphthene*
-Acetic acid*
-Acetic anhydride*
-Acetone*
-tert.-Amyl alcohol*
-Aniline*
-Antimony tribromide*
-Antimony trichloride*
-Azobenzene*

Benzil.—(Continued)

-Benzanilide*
-Benzene*
-Benzoic acid
Freezing point-solubility, 4: 179
-Benzoin
Freezing point-solubility, 4: 181
-Butyric acid
Boiling point elevation, 3: 340
-Camphor-Chloroform
Boiling point elevation, 3: 348
-Carbon disulfide
Boiling point elevation, 3: 331
-Carbon tetrachloride
Boiling point elevation, 3: 330
-Chloroacetic acid
Freezing point-solubility, 4: 106
-Chlorobenzene
Boiling point elevation, 3: 343
-Chloroform
Boiling point elevation, 3: 332
Density, 3: 148
-Chloroform-Naphthalene
Boiling point elevation, 3: 348
-Chloroform-Triphenylmethane
Boiling point elevation, 3: 348
-Cyclohexane
Boiling point elevation, 3: 346
-p-Cymene
Boiling point elevation, 3: 347
-Dibenzyl
Freezing point-solubility, 4: 163
-1, 1-Dichloroethane
Boiling point elevation, 3: 335
-Diphenyl
Boiling point elevation, 3: 347
-Ethyl acetate
Boiling point elevation, 3: 341
Density, 3: 167
-Ethyl alcohol
Boiling point elevation, 3: 337
Freezing point-solubility, 4: 111
Vapor pressure lowering, 3: 300
Viscosity, 5: 39
-Ethyl bromide
Boiling point elevation, 3: 336
-Ethyl ether
Boiling point elevation, 3: 341
Density, 3: 168
-Ethyl formate
Boiling point elevation, 3: 339
-Ethyl iodide
Boiling point elevation, 3: 336
-Ethylene bromide
Boiling point elevation, 3: 335
-Ethylene chloride
Boiling point elevation, 3: 335
-Fenchone
Boiling point elevation, 3: 347
-Formic acid
Boiling point elevation, 3: 333
-Hydrobenzoin
Freezing point-solubility, 4: 163
-Isoamyl acetate
Boiling point elevation, 3: 346
-Isoamyl alcohol
Boiling point elevation, 3: 343
-Isobutyl alcohol
Boiling point elevation, 3: 341
-Methyl acetate
Boiling point elevation, 3: 339
-Methyl alcohol
Boiling point elevation, 3: 334
Vapor pressure lowering, 3: 300
Viscosity, 5: 34
-Methyl formate
Boiling point elevation, 3: 335
-Methyl iodide
Boiling point elevation, 3: 333
-Methyl propyl ketone
Boiling point elevation, 3: 343

Benzil.—(Continued)

-Methyl thiocyanate
Boiling point elevation, 3: 335
-Methylal
Boiling point elevation, 3: 340
-Nitrobenzene
Boiling point elevation, 3: 343
Density, 3: 178
-Nitroethane
Boiling point elevation, 3: 336
-Nitromethane
Boiling point elevation, 3: 333
-Phenol
Boiling point elevation, 3: 345
-Propionic acid
Boiling point elevation, 3: 339
-Propionitrile
Boiling point elevation, 3: 338
-Propyl alcohol
Boiling point elevation, 3: 340
-Pyridine
Boiling point elevation, 3: 342
-Quinoline
Boiling point elevation, 3: 346
-Stilbene
Freezing point-solubility, 4: 163
-Toluene
Boiling point elevation, 3: 346
Density, 3: 188
-p-Toluidine
Boiling point elevation, 3: 346
-Trichloroacetic acid
Freezing point-solubility, 4: 104
-p-Xylene
Boiling point elevation, 3: 346

Benzilic acid
Heat of combustion, 5: 166
Solubility in water, 4: 253
-Chloroform
Distribution coefficients in water, 3: 432
-Ethyl ether
Distribution coefficients in water, 3: 432
-Hydrogen chloride
Freezing point-solubility in water, 4: 397
-Xylene
Distribution coefficients in water, 3: 432

β -Benzilmonoxime
-Benzene*

Benziloximes
-Isoamyl acetate
Viscosity, 5: 50

Benzine
Electrical conductivity, 6: 146
Sound, velocity of, in vapor, 6: 463

Benzoic acid
Absorption spectra, 5: 332, 341
Ultra-violet, 5: 362, 365-367, 372, 373
Activity coefficient, 7: 246
Boiling point, 3: 223
Boiling point elevation in aqueous solution, 3: 327
Cryoscopic constant, 4: 183
Diffusion in benzene, 5: 74
Diffusion in methyl alcohol, 5: 73
Electrical conductivity, 6: 144
Aqueous solution, 6: 279
Esterification constant, 7: 138
Flash point, 2: 161
Free energy of ionization, 7: 246
Free energy of solution, 7: 246
Heat of combustion, 5: 162, 165
Heat of fusion, 5: 133
Heat of solution in water, 5: 150
Ionization constant, 7: 246
Magnetic susceptibility, 6: 362
Photoluminescence, 5: 386

* Data for system will be found under this compound in Index. Full explanation on page vii.

Benzoic acid.—(Continued)

- Solubility in water, **3**: 391; **4**: 252
 Pressure, effect of, **3**: 393
 Solution velocity in water, **5**: 58
 Specific heat
 Liquid, **5**: 110
 Solid, **5**: 104
 Vapor pressure
 Liquid, **3**: 223
 Solid, **3**: 208
 Viscosity, **7**: 218
 -Acetamide*
 -Acetic acid*
 -Acetone*
 -Acetophenone*
 -Amyl acetate*
 -Amyl ether*
 - β -Amylene*
 -Aniline*
 -Anisole*
 -Antimony tribromide*
 -Antimony trichloride*
 -Antipyrine*
 -Benzamide*
 -Benzene*
 -Benzil*
 -Camphor
 Freezing point-solubility, **4**: 149
 -Carbon disulfide
 Boiling point elevation, **3**: 330
 Density, **3**: 145
 -Carbon tetrachloride
 Density, **3**: 144
 Distribution coefficients in water, **3**: 429
 Freezing point-solubility, **4**: 172
 Heat of solution, **5**: 151
 -Chloroacetic acid
 Freezing point-solubility, **4**: 173
 -Chlorobenzoic acid (*o*-, *m*-, *p*-)
 Freezing point-solubility, **4**: 169, 178
 -Chloroform
 Boiling point elevation, **3**: 331
 Density, **3**: 147
 Distribution coefficients in water, **3**: 429
 Heat of solution, **5**: 151
 -Cinnamic acid
 Freezing point-solubility, **4**: 179
 -Cumene
 Density, **3**: 187
 -Dichloroacetic acid
 Freezing point-solubility, **4**: 105
 -1, 1-Dichloroethane
 Boiling point elevation, **3**: 335
 -Diethyl ketone
 Boiling point elevation, **3**: 343
 -Dimethylpyrone
 Freezing point-solubility, **4**: 148
 -Diphenylamine
 Freezing point-solubility, **4**: 149
 -Ethyl acetate
 Boiling point elevation, **3**: 340
 Heat of formation, **5**: 153
 -Ethyl alcohol
 Boiling point elevation, **3**: 336
 Density, **3**: 160
 Aqueous solution, **3**: 127; **4**: 405
 Freezing point-solubility in water, **4**: 405
 Heat of solution, **5**: 152
 Vapor pressure lowering, **3**: 300
 -Ethyl alcohol-Water
 Vapor pressure, partial, **3**: 291
 -Ethyl bromide
 Boiling point elevation, **3**: 335
 -Ethyl ether
 Boiling point elevation, **3**: 341
 Compressibility, **3**: 440
 Density, **3**: 168
 Distribution coefficients in water, **3**: 429

Benzoic acid-Ethyl ether.—(Continued)

- Freezing point-solubility, **4**: 116
 Heat of solution, **5**: 153
 -Ethyl formate
 Boiling point elevation, **3**: 339
 -Ethylene dichloride
 Boiling point elevation, **3**: 335
 -*p*-Fluorobenzoic acid
 Freezing point-solubility, **4**: 145
 -Formic acid
 Boiling point elevation, **3**: 333
 -Hydrogen chloride
 Freezing point-solubility in water, **4**: 397
 -*m*-Hydroxybenzaldehyde
 Freezing point-solubility, **4**: 179
 -Iodine
 Freezing point lowering, **4**: 37
 Freezing point-solubility, **4**: 34
 -Isoamyl acetate
 Boiling point elevation, **3**: 346
 -Isoamyl alcohol
 Density, **3**: 173
 -Isobutyl bromide
 Boiling point elevation, **3**: 341
 -Methyl acetate
 Boiling point elevation, **3**: 339
 -Methyl alcohol
 Boiling point elevation, **3**: 333
 Density, **7**: 80
 Heat of solution, **5**: 152
 Refractive index, **7**: 80
 -Methyl iodide
 Boiling point elevation, **3**: 333
 -Methyl propyl ketone
 Boiling point elevation, **3**: 343
 -Methylal
 Boiling point elevation, **3**: 340
 -Naphthalene
 Freezing point-solubility, **4**: 179
 -Naphthylamine (α -, β -)
 Freezing point-solubility, **4**: 149
 -Nitric acid
 Freezing point-solubility in water, **4**: 399
 -Nitrobenzene
 Density, **3**: 177
 Freezing point-solubility, **4**: 176
 -*m*-Nitrobenzoic acid
 Freezing point-solubility, **4**: 146
 -Nitroethane
 Boiling point elevation, **3**: 336
 -Nitrogen tetroxide
 Boiling point elevation, **3**: 329
 -Phenetole
 Distribution coefficients in water, **3**: 429
 -Phenylacetic acid
 Freezing point-solubility, **4**: 149
 -Phosgene
 Boiling point elevation, **3**: 330
 -Piperonal
 Freezing point-solubility, **4**: 179
 -Potassium chloride
 Freezing point-solubility in water, **4**: 418
 -Potassium thiocyanate
 Freezing point-solubility in water, **4**: 418
 -Propionitrile
 Boiling point elevation, **3**: 338
 -Propyl alcohol
 Boiling point elevation, **3**: 340
 Heat of solution, **5**: 153
 -Propyl bromide
 Boiling point elevation, **3**: 340
 -Pyridine
 Density, **3**: 170
 Freezing point-solubility, **4**: 117
 Viscosity, **5**: 42

Benzoic acid.—(Continued)

- Quinoline
 Density, **3**: 187; **7**: 85
 Freezing point-solubility, **4**: 149
 Refractive index, **7**: 85
 Dispersion, **7**: 105
 -Salicylic acid
 Freezing point-solubility, **4**: 148
 -Sodium benzoate
 Freezing point-solubility in water, **4**: 418
 -Sodium chloride
 Freezing point-solubility in water, **4**: 418
 -Succinonitrile
 Freezing point-solubility in water, **4**: 413
 -Sulfur dioxide
 Boiling point elevation, **3**: 328
 -Sulfuric acid
 Freezing point-solubility, **4**: 188
 -Toluene
 Density, **3**: 186
 Distribution coefficients in water, **3**: 429
 Freezing point-solubility, **4**: 148
 Heat of solution, **5**: 154
 -Toluidine (*o*-, *p*-)
 Freezing point-solubility, **4**: 149
 -Trichloroacetic acid
 Freezing point-solubility, **4**: 102
 -Turpentine
 Density, **3**: 187
 -Xylene
 Density, **3**: 186
 Distribution coefficients in water, **3**: 429
Benzoic acid esters
 Optical rotatory power, **7**: 362
Benzoic anhydride
 Crystallization velocity, **5**: 61
 Heat of combustion, **5**: 166
 Magnetic susceptibility, **6**: 363
 Melting point under pressure, **4**: 10
 Saponification constant, **7**: 136
 -Acetamide*
 -Benzamide*
 -Benzene*
 -Iodine
 Freezing point lowering, **4**: 37
 Freezing point-solubility, **4**: 34
 -Nitrobenzene
 Boiling point elevation, **3**: 343
 -Phosgene
 Boiling point elevation, **3**: 330
 -Sulfur dioxide
 Boiling point elevation, **3**: 328
 -Sulfuric acid
 Freezing point-solubility, **4**: 189
o-Benzoic sulfinimide. See Saccharin.
Benzoil
 Absorption spectra, **5**: 350, 378
 Optical rotatory power, **7**: 362
 -Acetic acid*
 -Azobenzene*
 -Benzalaniline*
 -Benzanilide*
 -Benzil*
 -Benzylaniline
 Freezing point-solubility, **4**: 163
 -Dibenzyl
 Freezing point-solubility, **4**: 164
 -Hydrazobenzene
 Freezing point-solubility, **4**: 161
 -Nitrobenzene
 Boiling point elevation, **3**: 343
 -Quinoline
 Boiling point elevation, **3**: 346
Benzoil synthesis, kinetics of, **7**: 146
Benzonitrile
 Absorption spectra, **5**: 332, 340
 Birefringence, magnetic, **7**: 111, 113

* Data for system will be found under this compound in Index. Full explanation on page vii.

Benzonitrile.—(Continued)

- Boiling point, **3**: 222, 346
- Critical point data, **3**: 249
- Density, **3**: 29, 33
- Dielectric constant, **6**: 91
- Electrical conductivity, **6**: 144
- Heat of combustion, **5**: 168
- Heat of vaporization, **5**: 137
- Magnetic susceptibility, **6**: 362
- Photoluminescence, **5**: 386
- Polarization of light scattered by, **5**: 267
- Refractive index, **7**: 40
- Solubility of salts in, **4**: 211
- Specific heat, **5**: 110
- Surface tension, **4**: 455
- Vapor pressure, **3**: 222
- Verdet constant, **6**: 429
- Viscosity, **7**: 218
- Acetic acid*-Acetic anhydride-Acetylbenzoylimide-Benzonitrile
- Acetonitrile*
- Antimony tribromide*
- Antimony trichloride*
- Diphenylamine
 - Boiling point elevation, **3**: 346
- Mercuric chloride
 - Boiling point elevation, **3**: 346
- Mercuric iodide
 - Boiling point elevation, **3**: 346
- Potassium iodide
 - Density, **3**: 142
- Silver nitrate
 - Boiling point elevation, **3**: 346
- Tetraethylammonium iodide
 - Density, **3**: 186
- Tetrapropylammonium iodide
 - Density, **3**: 186

Benzophenone

- Absorption spectra, ultra-violet, **5**: 349, 378
- Accommodation coefficient, **5**: 53
- Birefringence, magnetic, **7**: 112
- Boiling point, **1**: 53; **3**: 227
- Cryoscopic constant, **4**: 184
- Crystallization velocity, **5**: 61
- Density, **3**: 30
- Dielectric constant, **6**: 96
- Heat of combustion, **5**: 167
- Heat of fusion, **5**: 134
- Magnetic susceptibility, **6**: 363
- Melting point under pressure, **4**: 16
- Refractive index, **7**: 59
- Specific heat, **5**: 104, 113
- Surface tension, **4**: 461
- Vapor pressure
 - Liquid, **3**: 227
 - Solid, **3**: 209
- Verdet constant, **6**: 430
- Viscosity, **5**: 28; **7**: 221
- Volume change on melting, **4**: 16
- Acetaldehyde*
- Acetone*
- Acetone*-Benzene
- Acetone*-Ethyl alcohol
- Aluminum bromide*
- Aluminum bromide*-Carbon disulfide
- Aluminum chloride*
- Antimony tribromide*
- Antimony trichloride*
- p-Azoxyanisole*
- Benzene*
- Carbon disulfide
 - Boiling point elevation, **3**: 330
- Catechol
 - Freezing point-solubility, **4**: 138
- Cyclohexane
 - Boiling point elevation, **3**: 346
- 1, 2-Dichloroethylene
 - Boiling point elevation, **3**: 334
- 2, 4-Dinitrophenol
 - Freezing point-solubility, **4**: 126

Benzophenone.—(Continued)

- Diphenylamine
 - Freezing point-solubility, **4**: 161
- Ethyl alcohol
 - Boiling point elevation, **3**: 337
 - Density, **3**: 161
 - Miscibility in water, **3**: 413
- Ethyl ether
 - Boiling point elevation, **3**: 341
- Hydroquinol
 - Freezing point-solubility, **4**: 140
- Isoamyl acetate
 - Boiling point elevation, **3**: 346
 - Density, **3**: 190
 - Viscosity, **5**: 50
- Naphthylamine (α -, β -)
 - Freezing point-solubility, **4**: 158
- Naphthol (α -, β -)
 - Freezing point-solubility, **4**: 156, 157
- Nitrophenol (o -, m -, p -)
 - Freezing point-solubility, **4**: 130
- Phenol
 - Freezing point-solubility, **4**: 137
- Picric acid
 - Freezing point-solubility, **4**: 121
- Propionic acid
 - Boiling point elevation, **3**: 339
- Pyridine
 - Boiling point elevation, **3**: 342
- Pyrogallol
 - Freezing point-solubility, **4**: 141
- Resorcinol
 - Freezing point-solubility, **4**: 139
- Sulfuric acid
 - Freezing point-solubility, **4**: 189
- Thymol
 - Freezing point-solubility, **4**: 158
- p-Toluidine
 - Freezing point-solubility, **4**: 152
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 104
- p-Benzoquinone
 - Absorption spectra, **5**: 338
 - Surface tension, **4**: 453
 - Trichloroacetic acid
 - Freezing point-solubility, **4**: 101
- Benzotrichloride
 - Absorption spectra, **5**: 340
 - Dielectric constant, **6**: 91
 - Viscosity, **7**: 218
- Benzoyl bromide, surface tension, **4**: 455
- Benzoyl chloride
 - Absorption spectra, **5**: 340
 - Birefringence, magnetic, **7**: 111, 113
 - Boiling point, **3**: 222
 - Dielectric constant, **6**: 91
 - Heat of combustion, **5**: 169
 - Magnetic susceptibility, **6**: 362
 - Refractive index, **7**: 40
 - Surface tension, **4**: 455
 - Vapor pressure, **3**: 222
 - Verdet constant, **6**: 429
 - Aluminum bromide*
 - Aluminum bromide*-Carbon disulfide
 - Aluminum chloride*
 - Antimony tribromide*
 - Antimony trichloride*
 - Benzene*
 - Chlorobenzene
 - Freezing point-solubility, **4**: 176
 - Diphenyl
 - Freezing point-solubility, **4**: 178
 - Diphenylmethane
 - Freezing point-solubility, **4**: 178
 - Mesitylene
 - Freezing point-solubility, **4**: 178
 - Nitrobenzene
 - Freezing point-solubility, **4**: 176
 - p-Xylene
 - Freezing point-solubility, **4**: 178

Benzoyl cyanide

- Heat of combustion, **5**: 168
- Benzoylacetone
 - Absorption spectra, **5**: 346
 - Dielectric constant, **6**: 95
 - Magnetic susceptibility, **6**: 363
 - Refractive index, **7**: 49
- Benzoylcinchonine
 - Acetone*
 - Ethyl alcohol
 - Density, **3**: 161
- Benzoylcinchotoxine
 - Acetone*
 - Ethyl alcohol
 - Density, **7**: 82
 - Refractive index, **7**: 82
- 2-Benzoylcyclohexanone
 - Ethyl alcohol
 - Density, **7**: 82
 - Refractive index, **7**: 82
 - Dispersion, **7**: 104
 - Toluene
 - Density, **7**: 86
 - Refractive index, **7**: 86
 - Dispersion, **7**: 105
- 2-Benzoylcyclopentanone
 - Ethyl alcohol
 - Density, **7**: 82
 - Refractive index, **7**: 82
 - Dispersion, **7**: 103
 - Toluene
 - Density, **7**: 86
 - Refractive index, **7**: 86
 - Dispersion, **7**: 105
- Benzoylegonine, absorption spectra, ultra-violet, **5**: 365, 367, 372
- Benzoylphenylacetylene
 - Verdet constant, **6**: 431
- Benzoylphenylhydrazine
 - Ethyl alcohol
 - Density, **3**: 161
 - Aqueous solution, **3**: 128
- d-Benzoyltetrahydroquinaldine
 - l-Benzoyltetrahydroquinaldine
 - Freezing point-solubility, **4**: 165
- Benzyl acetate
 - Absorption spectra, **5**: 345
 - Birefringence, magnetic, **7**: 111
 - Dielectric constant, **6**: 94
 - Viscosity, **7**: 220
 - Ethyl alcohol
 - Density, aqueous solution, **3**: 128
 - Miscibility in water, **3**: 412
 - Isoamyl acetate
 - Density, **3**: 189
 - Viscosity, **5**: 50
- Benzyl alcohol
 - Absorption spectra, **5**: 332, 341
 - Azeotropic mixtures, **3**: 322-323
 - Birefringence, **7**: 111, 113
 - Boiling point, **3**: 223
 - Compressibility, **3**: 37
 - Density, **3**: 29
 - Dielectric absorption, **6**: 92
 - Dielectric constant, **6**: 92
 - Electrical conductivity, **6**: 144
 - Heat of combustion, **5**: 164
 - Heat of vaporization, **5**: 137
 - Heat of wetting by, **5**: 142
 - Magnetic susceptibility, **6**: 362
 - Polarization of light scattered by, **5**: 267
 - Refractive index, **7**: 40
 - Specific heat, **5**: 111
 - Surface tension, **4**: 437, 456
 - Vapor pressure, **3**: 223
 - Verdet constant, **6**: 429
 - Viscosity, **7**: 218
 - X-rays, absorption coefficient, **6**: 14, 16
 - Benzene*
 - Diethyl tartrate
 - Density, **3**: 188

Benzyl alcohol.—(Continued)

- Ethyl alcohol*
Density, aqueous solution, **3**: 128
Miscibility in water, **3**: 412
- Ethyl alcohol-Water*
Vapor pressure, partial, **3**: 291
- Ethyl ether*
Density, **3**: 168
Viscosity, **5**: 41
- Ethylxanthic acid*
Distribution coefficients in water, **3**: 428
- Isoamyl acetate*
Density, **3**: 188
Viscosity, **5**: 49
- Benzyl benzoate**
Birefringence, magnetic, **7**: 112
Dielectric constant, **6**: 96
Electrical conductivity, **6**: 144
Surface tension, **4**: 461
Viscosity, **5**: 41, 46, 51; **7**: 221
X-ray diffraction bands, **1**: 352
- Benzene**
- Carbon disulfide*
Boiling point elevation, **3**: 331
- Ethyl acetate*
Density, **3**: 167
Viscosity, **5**: 41
- Ethyl benzoate*
Density, **3**: 193
Viscosity, **5**: 51
- Toluene*
Viscosity, **5**: 49
- Trichloroacetic acid*
Freezing point-solubility, **4**: 105
- Benzyl bromide**
Surface tension, **4**: 456
- Benzyl chloride*
Refractive index, **7**: 85
Dispersion, **7**: 105
- Benzyl chloride**
Absorption spectra, **5**: 332, 341
Azeotropic mixtures, **3**: 319, 322
Birefringence, magnetic, **7**: 111
Dielectric constant, **6**: 91
Diffusion of vapor in air, **5**: 62
Heat of combustion, **5**: 169
Magnetic susceptibility, **6**: 362
Polarization of light scattered by, **5**: 267
Refractive index, **7**: 40
Saponification by water, **7**: 137
Specific heat, **5**: 111
Surface tension, **4**: 456
- Anisole**
- Benzyl bromide**
- Methylaniline*
Freezing point-solubility, **4**: 150
- Nitrogen tetroxide*
Boiling point elevation, **3**: 329
- Benzyl cyanide**
Birefringence, magnetic, **7**: 111
Density, **3**: 29
Dielectric constant, **6**: 93
Electrical conductivity, **6**: 144
Heat of combustion, **5**: 168
Magnetic susceptibility, **6**: 362
Refractive index, **7**: 42
Surface tension, **4**: 457
Verdet constant, **6**: 429
Viscosity, **7**: 219
- Acetonitrile**
- Nitromethane*
Boiling point elevation, **3**: 333
- Phenetole*
Density, **3**: 190; **7**: 86
Refractive index, **7**: 86
Dispersion, **7**: 105
- Propionitrile*
Boiling point elevation, **3**: 338
- Tetraethylammonium iodide*
Density, **3**: 190

Benzyl ethyl ether

- Absorption spectra, **5**: 333, 345
- Ethyl alcohol*
Miscibility in water, **3**: 411
- Benzyl methyl ether**
Verdet constant, **6**: 429
Viscosity, **7**: 219
- Benzyl salicylate**
Dielectric constant, **6**: 96
- Benzylacetone**
-*Isoamyl acetate*
Density, **3**: 190
Viscosity, **5**: 50
- Benzylacetophenone**
Absorption spectra, **5**: 351
-*Isoamyl acetate*
Density, **3**: 190
Viscosity, **5**: 50
- Benzylamine**
Absorption spectra, **5**: 332, 342
Boiling point elevation in aqueous solution, **3**: 327
Density, **3**: 29
Dielectric constant, **6**: 92
Diffusion in methyl alcohol, **5**: 73
Electrical conductivity, **6**: 144
Aqueous solution, **6**: 281
Freezing point lowering of aqueous solution, **4**: 263
Heat of combustion, **5**: 168
Heat of solution in water, **5**: 150
Photoluminescence, **5**: 386
Refractive index, **7**: 41
Surface tension, **4**: 456
Verdet constant, **6**: 429
Viscosity, **7**: 218
- Chloroform*
Distribution coefficients in water, **3**: 430
- Ethyl ether*
Distribution coefficients in water, **3**: 430
- Xylene*
Distribution coefficients in water, **3**: 430
- d-Benzylaminosuccinic acid**
-*l-Benzylaminosuccinic acid*
Freezing point-solubility, **4**: 160
- Benzylammonium chloride**
Heat of solution in water, **5**: 150
-*Sulfur dioxide*
Boiling point elevation, **3**: 328
- Benzylaniline**
Absorption spectra, **5**: 349
Cryoscopic constant, **4**: 184
Crystallization velocity, **5**: 61
Heat of fusion, **5**: 134
Melting point under pressure, **4**: 10
Refractive index, **7**: 59
Verdet constant, **6**: 431
Viscosity, **7**: 221
- Azobenzene**
- Benzalaniline**
- Benzoin**
- Benzylideneaniline*
Viscosity, **5**: 51
- Benzylphenol*
Freezing point-solubility, **4**: 162
- Dibenzyl*
Freezing point-solubility, **4**: 163
- Hydrazobenzene*
Freezing point-solubility, **4**: 161
- Stilbene*
Freezing point-solubility, **4**: 163
- Toluene*
Freezing point-solubility, **4**: 162
- Benzylethylamine**
Dielectric constant, **6**: 94
Heat of combustion, **5**: 168
-*Ethyl ether*
Distribution coefficients in water, **3**: 431

Benzylethylamine.—(Continued)

- Xylene*
Distribution coefficients in water, **3**: 431
- Benzylethylene**, specific heat, **5**: 112
- Benzylidene chloride**
Absorption spectra, **5**: 341
Birefringence, **7**: 111
- Benzylidene methyl ethyl ketone**
Surface tension, **4**: 460
- Benzylidene p-tolyl ketone**
Refractive index, **7**: 30
- Benzylideneacetone**
Surface tension, **4**: 459
-*Cyclopentane*
Boiling point elevation, **3**: 342
- Isoamyl acetate*
Density, **3**: 190
Viscosity, **5**: 50
- Benzylideneacetophenone**
-*Isoamyl acetate*
Density, **3**: 190
Viscosity, **5**: 50
- Benzylideneaniline**
Absorption spectra, **5**: 349
Magnetic susceptibility, **6**: 363
- Azobenzene**
- Benzylaniline**
- Stilbene*
Viscosity, **5**: 51
- Benzylidenecamphor**
Optical rotatory power, **7**: 354
- Benzylidenemethylamine**
Birefringence, magnetic, **7**: 111
Magnetic susceptibility, **6**: 363
- Benzylidene- α -naphthylamine**
-*Benzylidene- β -naphthylamine*
Freezing point-solubility, **4**: 165
- Benzylmalonic acid**
Decomposition, kinetics of, **7**: 122
Electrical conductivity, aqueous solution, **6**: 295
Heat of combustion, **5**: 166
- Benzylmethylamine**
Dielectric constant, **6**: 93
-*Ethyl ether*
Distribution coefficients in water, **3**: 431
- Xylene*
Distribution coefficients in water, **3**: 431
- Benzylmethylcarbinol**
Optical rotatory power, **7**: 360
Refractive index, **7**: 47
Verdet constant, **6**: 430
- α -Benzyl naphthalene**
-*Picric acid*
Freezing point-solubility, **4**: 121
- Styphnic acid*
Freezing point-solubility, **4**: 122
- Benzylphenol**
-*Benzylaniline**
- Dibenzyl*
Freezing point-solubility, **4**: 162
- Benzylphenylurethan**, viscosity, **7**: 222
- Beraunite**
Density, **1**: 129
Refractive index, **1**: 129, 173
- Bergmann-Junk stability test (explosives)**
7: 489
- Bergmehl.** See Diatomaceous earth.
- Berlin alloy**, **2**: 373, 480, 601
- Bernda metal**, **2**: 373
- Bersch bearing alloy**, **2**: 373; cf. 543
- Berthier's alloy**, **2**: 373; cf. 601
- Berthierite**, density, **1**: 129
- Beryl**
Compressibility, **3**: 50
Density, **1**: 141
Dielectric constant, **6**: 99
Magnetic susceptibility, **6**: 364

* Data for system will be found under this compound in Index. Full explanation on page vii.

Beryl.—(Continued)

- Melting point, **1**: 141
- Refractive index, **1**: 141, 166; **7**: 23
- Specific heat, **5**: 98
- Thermal expansion, **3**: 45

Beryllium

- Boiling point, **1**: 102
- Cathodoluminescence, **5**: 389
- Critical potentials, **6**: 70
- Density, **1**: 103; **2**: 456
- Electrical conductivity, **1**: 103; **6**: 136
- Emission, spectral, **5**: 242
- Emission spectra, **5**: 283
- Heat of fusion, **1**: 103
- Isotopes, **1**: 45
- Magnetic susceptibility, **6**: 354
- Melting point, **1**: 103
- Persistent lines, **5**: 323
- Quantum numbers, **5**: 408
- Specific heat, **1**: 103; **5**: 93
- Spectral series, **5**: 395
- Thermochemistry, **5**: 195
- X-ray crystal structure, **1**: 340
- X-rays, scattering, modification by, **6**: 17

Zeeman effect, **5**: 420

-Aluminum***-Copper**

Equilibrium diagram, **2**: 426

-Iron

Equilibrium diagram, **2**: 450

-Silver

Equilibrium diagram, **2**: 421

Beryllium bromide

- Ammines
- Heat of formation, **5**: 195
- Heat of formation, **5**: 195
- Vapor pressure lowering in aqueous solution, **3**: 295

Beryllium chlorate

Density, aqueous solution, **3**: 71

Beryllium chloride

- Ammines, heat of formation, **5**: 195
- Density, aqueous solution, **3**: 71
- Electrical conductivity, **6**: 149
- Aqueous solution, **6**: 231, 233
- Freezing point lowering of aqueous solution, **4**: 257
- Heat of formation, **5**: 195
- Magnetic susceptibility, **6**: 359
- Refractive index, aqueous solution, **7**: 71
- Dispersion, **7**: 101
- Specific heat, aqueous solution, **5**: 123
- Vapor pressure lowering in aqueous solution, **3**: 295
- Viscosity, aqueous solution, **5**: 14
- Cadmium chloride**
- Freezing point-solubility, **4**: 55
- Lead chloride**
- Freezing point-solubility, **4**: 51
- Pyridine**
- Boiling point elevation, **3**: 342
- Silver chloride**
- Freezing point-solubility, **4**: 58
- Thallium monochloride**
- Freezing point-solubility, **4**: 53

Beryllium fluoride

- Band spectra, **5**: 411
- Heat of formation, **5**: 195

Beryllium hydroxide

- Heat of formation, **5**: 195
- Ionization constant, **7**: 291
- Magnetic susceptibility, **6**: 359

Beryllium iodide

- Ammines, heat of formation, **5**: 195
- Heat of formation, **5**: 195

Beryllium metasilicate

Melting point, **4**: 84

Beryllium nitrate

- Absorption spectra, solutions, **5**: 329
- Density, aqueous solution, **3**: 71, 108

Beryllium nitrate.—(Continued)

- Electrical conductivity, aqueous solution, **6**: 238, 240
- Freezing point lowering of aqueous solution, **4**: 257
- Heat of formation, **5**: 195
- Refractive index, aqueous solution, **7**: 71
- Dispersion, **7**: 101
- Specific heat, aqueous solution, **5**: 123
- Vapor pressure lowering in aqueous solution, **3**: 295

Beryllium oxalate

- Solubility in aqueous solutions, **7**: 339
- Beryllium oxide-Oxalic acid**
- Freezing point-solubility in water, **4**: 372
- Oxalic acid**
- Freezing point-solubility in water, **4**: 401

Beryllium oxide

- Band spectra, **5**: 411
- Density, **1**: 140
- Electrons, thermal emission of, **6**: 54
- Emission, spectral, **5**: 242
- Heat of formation, **5**: 195
- Magnetic susceptibility, **6**: 359
- Melting point, **1**: 140; **4**: 84
- Refractive index, **1**: 140, 167
- Specific heat, **5**: 87, 98
- Thermionic work function, **6**: 54
- X-ray diffraction data, **1**: 344
- Beryllium oxalate*-Oxalic acid**
- Beryllium selenate**
- Freezing point-solubility in water, **4**: 356
- Beryllium sulfate**
- Freezing point-solubility in water, **4**: 348
- Sodium oxide**
- Freezing point-solubility in water, **4**: 380

Beryllium oxycarbonate

Magnetic susceptibility, **6**: 359

Beryllium potassium sulfate

Solubility in water, **4**: 242

Beryllium selenate

- Density, **1**: 140
- Refractive index, **1**: 140, 169; **7**: 23
- Beryllium oxide***

Beryllium sulfate

- Decomposition pressure, **7**: 291
- Density, **1**: 140
- Aqueous solution, **3**: 71, 108
- Freezing point lowering of aqueous solution, **4**: 257
- Heat of formation, **5**: 195
- Hydrate
- Decomposition pressure, **7**: 291
- Heat of decomposition, **7**: 291
- Magnetic susceptibility, **6**: 359
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 140, 166; **7**: 23
- Solubility in sulfuric acid, **7**: 339
- Solubility in water, **4**: 228
- Specific heat, **5**: 98
- Aqueous solution, **5**: 123
- Vapor pressure lowering in aqueous solution, **3**: 295
- Viscosity, aqueous solution, **5**: 14
- Ammonium sulfate***
- Beryllium oxide***
- Potassium sulfate**
- Freezing point-solubility, **4**: 62
- Freezing point-solubility in water, **4**: 348, 390
- Sulfuric acid**
- Freezing point-solubility in water, **4**: 348

Beryllonite

- Density, **1**: 153
- Refractive index, **1**: 153, 170; **7**: 27

Bessemer steel

Magnetic properties, **6**: 376

Beta particles

- Absorption coefficients, **1**: 370; **6**: 61
- Absorption coefficients in air, **1**: 369
- Absorption coefficients in carbon dioxide, **1**: 369
- Diffusion, **1**: 370
- Ionization along path, **1**: 369
- Ionization of gases by, **1**: 365; **6**: 121
- Range of, in aluminum, **1**: 370

Betaine chloroaurate

Solubility in water, **4**: 224

Betaine hydrobromide

Solubility in water, **4**: 219

Betaine hydrochloride

- Absorption spectra, ultra-violet, **5**: 366
- Solubility in water, **4**: 219

Betaine hydroiodide

Solubility in water, **4**: 219

Betaine permanganate

Solubility in water, **4**: 224

Betaine phosphate

Solubility in water, **4**: 219

Betaine sulfate, solubility in water, 4: 219**Betol**

- Crystallization velocity, **5**: 61
- Specific heat
- Liquid, **5**: 113
- Solid, **5**: 105
- Phenyl salicylate**
- Freezing point-solubility, **4**: 181

Betonite, optical rotatory power, 7: 408**Betrandite**

- Density, **1**: 141
- Refractive index, **1**: 141, 171

Beudantite

- Density, **1**: 129
- Refractive index, **1**: 129, 167

Bicycloheptane

Heat of combustion, **5**: 163

Bicyclohexane

Heat of combustion, **5**: 163

Biddery (alloy), 2: 373**Bieberite**

- Density, **1**: 130
- Refractive index, **1**: 130, 168

Bierman tungsten bronze, 2: 373**Bikhaconine**

Optical rotatory power, **7**: 477

Bikhaconitine

Optical rotatory power, **7**: 478

Bilgen-bronze, 2: 373, 559**Bilinite**

- Density, **1**: 128
- Refractive index, **1**: 128, 169

Binnite, density, 1: 123**Biochemical kinetics, 7: 153****Biotite**

Transmission of radiant energy, **5**: 270

Birefringence

- Coefficients of, **7**: 109
- Electric, **7**: 109
- Magnetic, **7**: 109
- Optical, **7**: 16

Birmingham platinum, 2: 373; cf. 465, 546**Bisbeeite, refractive index, 1: 123, 171****Bischofite**

- Density, **1**: 141
- Melting point, **1**: 141
- Refractive index, **1**: 141, 169

Bismite

- Density, **1**: 111
- Refractive index, **1**: 111, 167

Bismuth

- Absorption, index of, **5**: 249
- Boiling point, **1**: 102; **3**: 205
- Cathodoluminescence, **5**: 389

* Data for system will be found under this compound in Index. Full explanation on page vii.

Bismuth.—(Continued)

- Compressibility
 - Cubical, **3**: 46
 - Linear, **3**: 48
 - Single crystals, **3**: 49
- Contact potential, **6**: 57
- Corbino effect, **6**: 419
- Critical potentials, **6**: 70
- Density
 - Liquid, **1**: 102; **2**: 457, 463
 - Solid, **1**: 103; **2**: 456
- Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 103; **6**: 136–138
 - Low temperature, **6**: 125, 132
 - Magnetic field, effect of, **6**: 421–423
 - Single crystal, **6**: 126, 135
- Electrode potential, **6**: 319; **7**: 242
- Electrons excited by X-rays, number of, **6**: 5
- Electrons freed by X-rays, energy of, **6**: 4
- Emission, spectral, **5**: 253, 255
- Emission spectra, **5**: 284
- Ettingshausen effect, **6**: 419
- Fluorescence of vapor, **5**: 391
- Hall effect, **6**: 416, 417, 418
- Heat of fusion, **1**: 103; **2**: 458
- Heat of vaporization, **1**: 102; **2**: 458
- Isotopes, **1**: 45
- Magnetic susceptibility, **6**: 354
- Melting point, **1**: 103
- Nernst effect, **6**: 420, 421
- Peltier coefficient, **6**: 227, 228
- Persistent lines, **5**: 323
- Photoelectric threshold, **6**: 68
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 249
- Righi-Leduc effect, **6**: 421
- Specific heat
 - Liquid, **1**: 103; **5**: 94
 - Solid, **1**: 103; **5**: 93
- Spectral series, **5**: 395
- Surface tension, **1**: 103; **4**: 439
- Thermal conductivity, **5**: 220
 - Crystals, **5**: 231
 - Magnetic field, effect of, **6**: 424
- Thermal expansion
 - Liquid, **1**: 102; **2**: 463
 - Solid, **1**: 103; **2**: 460
- Thermochemistry, **5**: 181
- Thermoelectric properties, **6**: 214, 225
- Thomson coefficient, **6**: 228
- Vapor pressure, **3**: 205
- Viscosity, liquid, **5**: 7
- Volume change on fusion, **2**: 474
- Volume change on solidification, **2**: 475
- X-ray absorption limits, **6**: 42
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 42
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption coefficient, **6**: 13, 14
- Zeeman effect, **5**: 420
- Aluminum*
 - Aluminum*-Antimony
 - Aluminum*-Silver
 - Aluminum*-Tin
 - Antimony*
 - Antimony*-Zinc
 - Arsenic*-Copper-Oxygen
- Bismuth trichloride
 - Viscosity, **5**: 26
- Bromine
 - Freezing point-solubility, **4**: 23
- Cadmium
 - Equilibrium diagram, **2**: 426
 - Hardness, **2**: 548
 - Magnetic susceptibility, **6**: 365
 - Specific heat, **5**: 120
 - Thermal conductivity, **5**: 223
 - Thermoelectric properties, **6**: 217

Bismuth.—(Continued)

- Cadmium-Lead-Tin
 - Electrical conductivity, **6**: 165, 196, 197
 - Specific heat, **5**: 121
 - Thermal conductivity, **5**: 223
- Cadmium-Zinc
 - Equilibrium diagram, **2**: 447, 448
 - Miscibility relations, **3**: 407
- Calcium
 - Equilibrium diagram, **2**: 426
- Cerium
 - Equilibrium diagram, **2**: 427
- Chlorine
 - Freezing point-solubility, **4**: 23
- Cobalt
 - Equilibrium diagram, **2**: 427
- Copper
 - Equilibrium diagram, **2**: 427
- Copper-Tin
 - Volume change on solidification, **2**: 476
- Cuprous chloride
 - Solubility in water, **7**: 261
- Gold
 - Density, **2**: 589
 - Diffusion of, in, **5**: 75
 - Electrical conductivity, **6**: 165
 - Equilibrium diagram, **2**: 424
- Iodine
 - Freezing point-solubility, **4**: 24
- Iron
 - Electrical conductivity, **6**: 174
- Lead
 - Absorption, index of, **5**: 251
 - Electrical conductivity, **6**: 165, 198
 - Equilibrium diagram, **2**: 414
 - Magnetic susceptibility, **6**: 365
 - Refraction, index of, **5**: 251
 - Specific heat, **5**: 120
 - Surface tension, **4**: 440
 - Thermal conductivity, **5**: 223
 - Thermal expansion, **2**: 474
 - Thermoelectric properties, **6**: 217, 218
 - Viscosity, liquid, **5**: 7
- Lead-Mercury
 - Electrical conductivity, **6**: 190
- Lead-Tin
 - Electrical conductivity, **6**: 197
 - Equilibrium diagram, **2**: 418
 - Specific heat, **5**: 121
 - Thermal conductivity, **5**: 223
- Magnesium
 - Electrical conductivity, **6**: 165
 - Equilibrium diagram, **2**: 427
- Manganese
 - Curie point, **6**: 407
 - Equilibrium diagram, **2**: 428
 - Kerr constant, **6**: 436
- Mercury
 - Absorption, index of, **5**: 251
 - Density, **2**: 589
 - Electrical conductivity, **6**: 165, 190
 - Equilibrium diagram, **2**: 427
 - Magnetic susceptibility, **6**: 365
 - Refraction, index of, **5**: 251
 - Thermal expansion, **2**: 474
 - Thermoelectric properties, **6**: 220
 - Vapor pressure, partial, **3**: 284
 - Vapor pressure lowering, **3**: 300
- Nickel
 - Equilibrium diagram, **2**: 428
- Potassium
 - Equilibrium diagram, **2**: 427
- Selenium
 - Equilibrium diagram, **2**: 428
 - Freezing point-solubility, **4**: 26
- Silicon
 - Equilibrium diagram, **2**: 428
- Silver
 - Density, **2**: 589
 - Electrical conductivity, **6**: 160

-Silver.—(Continued)

- Equilibrium diagram, **2**: 421
- Specific volume, **2**: 589
- Silver-Zinc
 - Miscibility relations, **3**: 407
- Sodium
 - Equilibrium diagram, **2**: 427
- Sulfur
 - Freezing point-solubility, **4**: 25
- Sulfur-Tellurium
 - Freezing point-solubility diagram, **4**: 38, 39
- Tellurium
 - Electrical conductivity, **6**: 166
 - Equilibrium diagram, **2**: 428
 - Freezing point-solubility, **4**: 28
 - Magnetic susceptibility, **6**: 365
 - Thermoelectric properties, **6**: 218
- Thallium
 - Electrical conductivity, **6**: 166
 - Equilibrium diagram, **2**: 428
 - Magnetic susceptibility, **6**: 365
 - Thermal expansion, **2**: 474
- Tin
 - Electrical conductivity, **6**: 165
 - Equilibrium diagrams, **2**: 416
 - Hall effect, **6**: 417
 - Magnetic susceptibility, **6**: 365
 - Specific heat, **5**: 120
 - Surface tension, **4**: 440
 - Thermal conductivity, **5**: 223
 - Thermal expansion, **2**: 474
 - Thermoelectric properties, **6**: 218
 - Thomson coefficient, **6**: 228
 - Viscosity, liquid, **5**: 7
 - Volume change on solidification, **2**: 475
- Tin-Zinc
 - Equilibrium diagram, **2**: 418
 - Miscibility relations, **3**: 407
- Zinc
 - Equilibrium diagram, **2**: 428
 - Magnetic susceptibility, **6**: 365
- Bismuth acetate
 - Magnetic susceptibility, **6**: 362
- Acetic acid*
- Bismuth bromide
 - Absorption spectra, solutions, **5**: 328
 - Density, **3**: 23; **4**: 442
 - Magnetic susceptibility, **6**: 356
 - Surface tension, **4**: 442
- Aluminum bromide*
- Antimony tribromide*
- Lead bromide
 - Freezing point-solubility, **4**: 48
- Bismuth carbonate
 - Magnetic susceptibility, **6**: 356
- Bismuth chloride
 - Absorption spectra, solutions, **5**: 328
 - Boiling point, **3**: 329
 - Density, **3**: 23; **4**: 442
 - Electrical conductivity, **6**: 147
 - Heat of formation, **5**: 181
 - Magnetic susceptibility, **6**: 356
 - Surface tension, **4**: 442
 - Vapor pressure, **3**: 207
 - Viscosity, **5**: 26; **7**: 212
- Acetone*
- Antimony trichloride*
- Barium chloride*
- Bismuth*
- Bismuth phosphate
 - Boiling point elevation, **3**: 329
- Cadmium chloride
 - Boiling point elevation, **3**: 329
- Calcium chloride
 - Boiling point elevation, **3**: 329
- Cesium chloride
 - Boiling point elevation, **3**: 329
- Cobaltous chloride
 - Boiling point elevation, **3**: 329

* Data for system will be found under this compound in Index. Full explanation on page vii.

Bismuth chloride.—(Continued)

- Cupric chloride*
Boiling point elevation, **3**: 329
- Cuprous chloride*
Boiling point elevation, **3**: 329
Freezing point-solubility, **4**: 48
- Ethyl acetate*
Density, **3**: 137
- Ethyl ether*
Boiling point elevation, **3**: 341
- Ferric chloride*
Freezing point-solubility, **4**: 48
- Ferrous chloride*
Boiling point elevation, **3**: 329
- Hydrogen chloride*
Density, **3**: 133
Aqueous solution, **3**: 95
Verdet constant, **6**: 427
- Lead chloride*
Boiling point elevation, **3**: 329
Freezing point-solubility, **4**: 48
- Lithium chloride*
Boiling point elevation, **3**: 329
- Manganous chloride*
Boiling point elevation, **3**: 329
- Methyl acetate*
Boiling point elevation, **3**: 339
- Palladium chloride*
Boiling point elevation, **3**: 329
- Platinum dichloride*
Boiling point elevation, **3**: 329
- Potassium chloride*
Boiling point elevation, **3**: 329
- Rubidium chloride*
Boiling point elevation, **3**: 329
- Silver chloride*
Boiling point elevation, **3**: 329
- Sodium chloride*
Boiling point elevation, **3**: 329
- Strontium chloride*
Boiling point elevation, **3**: 329
- Thallium monochloride*
Freezing point-solubility, **4**: 48
- Zinc chloride*
Boiling point elevation, **3**: 329
Freezing point-solubility, **4**: 48, 78

Bismuth hydroxide

- Chromic acid*
Freezing point-solubility in water, **4**: 370
- Hydrogen chloride*
Freezing point-solubility in water, **4**: 298
- Nitric acid*
Freezing point-solubility in water, **4**: 359
- Potassium hydroxide*
Freezing point-solubility in water, **4**: 371
- Sodium hydroxide*
Freezing point-solubility in water, **4**: 371

Bismuth iodide

- Magnetic susceptibility, **6**: 356
- Fenchone*
Boiling point elevation, **3**: 347
- Iodine*
Boiling point elevation, **3**: 325
- Methylene iodide*
Density, **3**: 137

Bismuth molybdate

- Lead molybdate*
Freezing point-solubility, **4**: 48

Bismuth nitrate

- Absorption spectra, solutions, **5**: 328
- Magnetic susceptibility, **6**: 356
- Verdet constant, aqueous solution, **6**: 426
- Acetone**-*Nitric acid*

Bismuth oxychloride

- Heat of formation, **5**: 181

Bismuth oxychloride.—(Continued)

- Hydrogen chloride*
Density, aqueous solution, **3**: 95
Solubility in water, **7**: 242
- Bismuth pentoxide**
Photoelectric current, **6**: 68
- Bismuth perchlorate**
Absorption spectra, solutions, **5**: 328
- Bismuth phosphate**
Reflectivity, selective, **5**: 260
-*Bismuth chloride**
- Bismuth salicylate (basic)**
-*Ethyl alcohol*
Freezing point-solubility in water, **4**: 405
- Bismuth selenide**
Density, **1**: 111
Magnetic susceptibility, **6**: 356
Melting point, **1**: 111
- Bismuth sulfate**
Absorption spectra, solutions, **5**: 328
- Bismuth sulfide**
Compressibility, **3**: 50
Density, **1**: 111
Heat of formation, **5**: 181
Magnetic susceptibility, **6**: 356
Photoconductivity, **6**: 66
Photoelectric current, **6**: 69
Specific heat, **5**: 95
-*Antimony trisulfide**
- Bismuth telluride*
Freezing point-solubility, **4**: 48
- Silver selenide*
Freezing point-solubility, **4**: 48
- Bismuth trioxide**
Band spectra, **5**: 411
Electrical conductivity, **6**: 153
Heat of formation, **5**: 181
Magnetic susceptibility, **6**: 356
Photoelectric current, **6**: 68
Specific heat, **5**: 95
Thermoelectric power, **6**: 224
Transition temperature, **4**: 7
-*Lead oxide*
Freezing point-solubility, **4**: 47
- Bismuth tungstate**
-*Lead tungstate*
Freezing point-solubility, **4**: 48
- Bismuthinite.** See **Bismuth sulfide.**
- Bismuthyl hydroxide**
Magnetic susceptibility, **6**: 356
- Bistetrazole**, freezing point lowering of aqueous solution, **4**: 262
- Bitumens**
Nomenclature, **2**: 168
Properties, **2**: 169
Rubber, effect on, **2**: 287
Thermal conductivity, **2**: 315
- Bixbyite**, density, **1**: 130
- Bjerkite**, density, **1**: 116
- Black body**
Brightness, **5**: 246
Definition, **1**: 34
Luminous characteristics, **5**: 437
- Black-body radiator**
Hemispherical radiation from, **5**: 238
Monochromatic intensity of, **5**: 239
- Black heart (alloy)**, **2**: 373
- Black powder**, **7**: 494
- Blanko-blech (alloy)**, **2**: 373; cf. 480, 601
- Blast furnace slag**
Density, **2**: 313
Thermal conductivity, **2**: 313
- Blatt gold**, **2**: 373; cf. 555, 601
- Blatt silver**, **2**: 373
- Bleaching powder**
Density, aqueous solution, **3**: 73
Heat of formation, **5**: 196
- Blende.** See **Zinc sulfide.**
- Bloch's alloy**, **2**: 373

Bloedite

- Density, **1**: 153
- Refractive index, **1**: 153, 169; **7**: 27
- Bobbinite (explosive)**, **7**: 494
- Bobierite**
Density, **1**: 141
Refractive index, **1**: 141, 169
- Bobierre metal**, **2**: 373; cf. 555, 601
- Böhler steel**, **2**: 373, 472
- Bohr magneton**, **6**: 346
- Boiling point elevation**, **3**: 324
Soap solutions, **5**: 456
- Boiling points**
Chemical compounds, **1**: 310
Inorganic, **1**: 162
Organic, **1**: 176
Composition, variation with, **3**: 308, 324
Correction of, **3**: 246
Elements, **1**: 102; **3**: 201, 205
See also **Vapor pressure.**
- Bolting cloth**, **2**: 332
- Boltzmann's molecular gas constant**
Definition, **1**: 34, 37
- Bombicsterol**
Optical rotatory power, **7**: 464
- Bone tar pitch.** See **Pitches.**
- Bone tars.** See **Tars.**
- Boothite**, density, **1**: 122
- Boracite**
Pyroelectric constant, **6**: 210
Refractive index, **7**: 23
Specific heat, **5**: 99
Thermal expansion, **3**: 45
Transition temperature, **4**: 7
- Borax**
Density, **1**: 153
Magnetic susceptibility, **6**: 360
Melting point, **1**: 153
Refractive index, **1**: 153, 168; **7**: 27
Specific heat, **5**: 100
Verdet constant, **6**: 426
- Borcher's non-corrosive alloys**, **2**: 373
- Borgströmite**, refractive index, **7**: 22
- Boric acid**
Albedo, **5**: 262
Boiling point elevation in aqueous solution, **3**: 325
Density, aqueous solution, **3**: 70
Diffusion in water, **5**: 66
Electrical conductivity, aqueous solution, **6**: 260
Freezing point lowering of aqueous solution, **4**: 257, 261
Heat of formation, **5**: 194
Ionization constant, **7**: 288
Magnetic susceptibility, **6**: 359
Solubility in water, **4**: 226, 251
Thermal conductivity, aqueous solution, **5**: 227
Vapor pressure, aqueous solution, **3**: 367
Vapor pressure lowering in aqueous solution, **3**: 294
-*Acetic acid**
- Ammonium hydroxide**
- Amyl alcohol**
- Amyl alcohol**-*Sodium chloride*
- Calcium hydroxide*
Freezing point-solubility in water, **4**: 379
- Chromic acid*
Freezing point-solubility in water, **4**: 378
- Dulcitol*
Density, aqueous solution, **3**: 102
- Ethyl alcohol*
Density, **3**: 140
Aqueous solution, **3**: 102
- Glycerol*
Density, **3**: 140
Aqueous solution, **3**: 102

* Data for system will be found under this compound in Index. Full explanation on page vii.

Boric acid.—(Continued)

-Hydrogen chloride

Freezing point-solubility in water, 4: 309

-Isoamyl alcohol

Density, 3: 140
Aqueous solution, 3: 102

-Isobutyl alcohol

Density, 3: 140
Aqueous solution, 3: 102

-Lactic acid

Density, aqueous solution, 3: 102

-Lithium hydroxide

Freezing point-solubility in water, 4: 380, 394

-Mannitol

Density, aqueous solution, 3: 102
Freezing point-solubility in water, 4: 418

-Methyl alcohol

Density, 3: 140
Aqueous solution, 3: 102

-Oxalic acid

Freezing point-solubility in water, 4: 401

-Potassium hydroxide

Freezing point-solubility in water, 4: 380, 394

-Propyl alcohol

Density, 3: 140
Aqueous solution, 3: 102

-Sodium hydroxide

Freezing point-solubility in water, 4: 380, 394

-Tartaric acid

Freezing point-solubility in water, 4: 415

-cis-Tetrahydronaphthalene-1, 2-diol

Freezing point-solubility in water, 4: 421

Boric oxideDensity, 1: 136
Heat of formation, 5: 194
Magnetic susceptibility, 6: 359
Refractive index, 1: 136, 165; 7: 13
Specific heat, 5: 98
Viscosity, 7: 212

-Barium oxide*

-Cadmium oxide

Freezing point-solubility, 4: 55

-Calcium oxide

Freezing point-solubility, 4: 85

-Lead oxide

Freezing point-solubility, 4: 50

-Lithium oxide

Freezing point-solubility, 4: 61

-Manganous oxide

Freezing point-solubility, 4: 60

-Sodium oxide

Freezing point-solubility, 4: 61

-Strontium oxide

Freezing point-solubility, 4: 85

-Sulfuric acid

Boiling point elevation, 3: 328

Borneocamphene

Heat of combustion, 5: 163

BorneolAbsorption spectra, 5: 347
Azeotropic mixtures, 3: 322
Heat of combustion, 5: 164
Optical rotatory power, 7: 454
Vapor pressure, 3: 209
Verdet constant, dispersion of, 6: 433

-Acetaldehyde*

-Acetone*

-Benzene*

-Camphene

Freezing point-solubility, 4: 159

-Camphor

Freezing point-solubility, 4: 159

Borneol.—(Continued)

-Ethyl acetate

Density, 7: 83
Refractive index, 7: 83

-Ethyl alcohol

Boiling point elevation, 3: 337
Density, 3: 161; 7: 82
Refractive index, 7: 82

-Methyl alcohol

Density, 3: 152

-Pinene hydrochloride

Freezing point-solubility, 4: 159

Bornite, density, 1: 129

Bornyl acetateOptical rotatory power, 7: 455
Refractive index, 7: 58**Bornyl chloride**

Optical rotatory power, 7: 453

Bornylamine

Optical rotatory power, 7: 456

-Xylene

Distribution coefficients in water 3: 432

Bornylcarbamide

Optical rotatory power, 7: 458

Bornylcarbimide

Optical rotatory power, 7: 458

BornyleneAbsorption spectra, 5: 346
Optical rotatory power, 7: 433**Bornylene nitrosite**

-Acetone*

d-Bornylmethylene etherCrystallography, 1: 336
Refractive index, 7: 30**Borolon.** See Alundum.**Boron**Boiling point, 1: 102
Compressibility, 3: 46
Critical potentials, 6: 70
Density, 1: 103; 2: 456
Electrical conductivity, 1: 103; 6: 153
Emission spectra, 5: 283
Hardness, 2: 592
Isotopes, 1: 45
Magnetic susceptibility, 6: 354
Melting point, 1: 103
Refractive index, 1: 103
Persistent lines, 5: 323
Quantum numbers, 5: 408
Specific heat, 1: 103; 5: 92
Spectral series, 5: 395
Thermal expansion, 1: 103
Thermochemistry, 5: 193
X-rays, scattering modification by, 6: 17

X-rays, scattering of, 6: 17

Zeeman effect, 5: 420

-Barium*

-Calcium

Density, 2: 594

-Carbon-Iron

Equilibrium diagram, 2: 454

-Chromium

Density, 2: 594

-Cobalt

Density, 2: 594

-Iron

Electrical conductivity, 6: 172, 174
Equilibrium diagram, 2: 450
Magnetic properties, 6: 391, 393

-Manganese

Curie point, 6: 407
Magnetic properties, 6: 407

-Nickel

Equilibrium diagram, 2: 426

-Strontium

Density, 2: 594

Boron bromide

Heat of formation, 5: 194

Boron bromide.—(Continued)

Vapor pressure

Liquid, 3: 214

Solid, 3: 208

Boron chlorideBoiling point, 3: 232
Heat of formation, 5: 194
Heat of vaporization, 5: 136
Vapor pressure, 3: 214
Vapor pressure above 1 atm., 3: 232**Boron ethylate**Boiling point, 1: 136, 164
Density, 1: 136
Refractive index, 1: 136, 165**Boron fluoride**Boiling point, 3: 232
Heat of formation, 5: 194
Vapor density above 1 atm., 3: 232
-Hydrogen sulfide
Freezing point-solubility, 4: 42**Boron hydride**Vapor pressure, 3: 214
X-ray diffraction data, 1: 343**Boron isoamylate**Density, 1: 136
Refractive index, 1: 136, 165**Boron isobutylate**Density, 1: 136
Refractive index, 1: 136, 165**Boron nickel steels**

Mechanical properties, 2: 530

Boron nitrideDecomposition pressure, 7: 288
Decomposition temperature, 4: 84
Magnetic susceptibility, 6: 359
Specific heat, 5: 98**Boron oxide**Band spectra, 5: 411, 417
Density, liquid, 3: 23
Electrons, thermal emission of, 6: 54
Thermionic work function, 6: 54**Boron steels, 2: 373, 530**Electrical conductivity, 6: 174
Hardness, 2: 531
Mechanical properties, 2: 530**Boron triethyl, vapor pressure, 3: 222****Boron trimethyl**Boiling point, 3: 218
Vapor pressure, 3: 218**Boronized copper, 2: 373, 558****Botryogenite**Density, 1: 142
Refractive index, 1: 142, 170**Bougie decimale, definition, 1: 34****Boulangerite**Density, 1: 116
Photoconductivity, 6: 66**Bourbonnes, 2: 373****Bournonite**Photoconductivity, 6: 66
Specific heat, 5: 97
Thermal conductivity, 5: 231**Boussingaultite**Density, 1: 141
Refractive index, 1: 141, 168; 7: 31**Boxwood**Density, 2: 314
Thermal conductivity, 2: 314**Brandes and Schumann alloy**

Emission, spectral, 5: 254

BrandtiteDensity, 1: 144
Refractive index, 1: 144, 172**Brass**Acoustic resistivity, 6: 459
Admiralty, 2: 370, 470, 556
Aluminum, 2: 556
Annealing temperatures, 2: 555
Contact potential, 6: 57
Electron emission excited by its positive ion, 6: 65

* Data for system will be found under this compound in Index. Full explanation on page vii.

Brass.—(Continued)

- Endurance limits, **2**: 600, 601, 606, 607
- English specifications, **2**: 386
- Gamma rays, absorption coefficient, **6**: 21
- Hardness
 - Annealing, effect of, **2**: 556
 - Rolling, effect of, **2**: 555
- High tensile, **2**: 556
- Iron, **2**: 556
- Leaded, endurance limits, **2**: 602
- List of, **2**: 389
- Manganese, **2**: 556
- Mechanical properties, **2**: 555, 556
 - Annealing, effect of, **2**: 555
- Oxidized, emission, spectral, **5**: 244
- Partial vapor pressure, **3**: 284
- Sound, velocity of, in, **6**: 459, 465
- Specific heat, **5**: 121
- Thermal conductivity, **5**: 220, 224
- Thermal expansion, **2**: 469
- Thermoelectric properties, **6**: 219, 225
- Tin, **2**: 556
- Viscosity, tangential coefficient, **5**: 9
- Zinc, diffusion of, in, **5**: 77

Brassicidic acid

- Absorption spectra, **5**: 355
- Cryoscopic constant, **4**: 184
- Esterification constant, **7**: 138
- Heat of combustion, **5**: 166
- Behenic acid*
- Erucic acid
 - Freezing point-solubility, **4**: 167
- Isoerucic acid
 - Freezing point-solubility, **4**: 167

Brassylic acid, heat of combustion, 5: 166**Braunite, density, 1: 128****Brazil, weights and measures, 1: 3****Breccia**

- Bulk density, **2**: 52
- Compressive strength, **2**: 48
- Porosity, **2**: 54

Breit-Dirac formula (Scattering function), 6: 19**Breithauptite**

- Density, **1**: 132
- Melting point, **1**: 132
- See also Nickel antimonide.

Brick

- Acoustic absorption of, **6**: 459
- Density, **2**: 314
- Heat loss from, **5**: 244
- Insulating, for high temperature, **2**: 316
- Refractory, **2**: 82
- Sound, velocity of, in, **6**: 465
- Thermal conductivity, **2**: 314
- See also Clay, Masonry, Sand-lime brick.

Bridge bronze, 2: 373; cf. 475, 476, 559, 560, 562, 566**Brightness**

- Definition, **1**: 34
- Discrimination of, **1**: 93

Brightness temperature, 1: 59; 5: 245**Brightray (alloy), 2: 373****Brillouin's formula (flow of gas), 5: 1****Brinell hardness number, definition, 2: x****Brines, refrigerating, 2: 327****Bristol brass, 2: 373; cf. 555, 601****British India, weights and measures, 1: 3****British Thermal Unit, 1: 18, 34****Brittania metal, 2: 373; cf. 476, 557****Brix, 2: 373****Brochantite**

- Density, **1**: 122
- Refractive index, **1**: 122, 173

Brolunick (alloy), 2: 373**Bromal**

- Boiling points, aqueous solutions, **3**: 309
- Density, aqueous solution, **3**: 113
- Dielectric constant, **6**: 84

Bromal.—(Continued)

- Diffusion in methyl alcohol, **5**: 72
- Electrical conductivity, **6**: 143
- Viscosity, **7**: 213
- Bromal hydrate**
 - Cryoscopic constant, **4**: 183
 - Freezing point lowering of aqueous solution, **4**: 262
 - Heat of fusion, **5**: 132
 - Solubility in water, **3**: 387
 - Viscosity, **7**: 213
- Bromate ion, free energy, 7: 234**
- Bromic acid**
 - Absorption spectra, solutions, **5**: 327
 - Electrical conductivity, aqueous solution, **6**: 242
 - Free energy of aqueous solution, **7**: 235
 - Heat of formation, **5**: 177
 - Viscosity, aqueous solution, **5**: 12
- Bromine**
 - Addition to double bonds, kinetics, **7**: 124
 - Adsorption by charcoal, **3**: 251
 - Band spectra, **5**: 411
 - Boiling point, **1**: 102; **3**: 324
 - Compressibility, liquid, **3**: 35
 - Critical constants, **1**: 102; **3**: 201, 248
 - Critical potentials, **6**: 72
 - Decomposition pressure of hydrate, **7**: 234
 - Density
 - Aqueous solution, **3**: 54
 - Liquid, **1**: 102; **3**: 20
 - Solid, **1**: 103
 - Dielectric constant
 - Gas, **6**: 74
 - Liquid, **6**: 75
 - Diffusion in benzene, **5**: 74
 - Diffusion in carbon disulfide, **5**: 75
 - Diffusion in water, **5**: 63
 - Dispersion formula, **7**: 11
 - Dissociation, work of, **6**: 72
 - Dissymmetry in emission of electrons freed by X-rays, **6**: 5
 - Electrical conductivity
 - Liquid, **1**: 103; **6**: 142
 - Solid, **1**: 103; **6**: 153
 - Electrode potential, **7**: 234
 - Electrons, absorption of, by, **6**: 61
 - Emission, spectral, **5**: 257
 - Emission spectra, **5**: 284
 - Free energy, **7**: 234
 - Dissociation, **7**: 234
 - Electrode reaction, **7**: 234
 - Fusion, **7**: 234
 - In carbon tetrachloride, **7**: 234
 - In water, **7**: 234
 - Reaction with hydrogen, **7**: 234
 - Reaction with water, **7**: 234
 - Solution, **7**: 234
 - Vaporization, **7**: 234
 - Freezing point lowering of aqueous solution, **4**: 254, 261
 - Heat of dissociation, **5**: 418; **7**: 234
 - Heat of fusion, **1**: 103; **5**: 131; **7**: 234
 - Heat of vaporization, **1**: 102; **5**: 135; **7**: 234
 - Hydrolysis constant, **7**: 235
 - Internal pressure, **4**: 19
 - Ionization, atomic, **6**: 122
 - Ionization by α -particles, **6**: 122
 - Isotopes, **1**: 45
 - Magnetic susceptibility, **6**: 354
 - Melting point, **1**: 103
 - Overvoltage, **6**: 340
 - Persistent lines, **5**: 323
 - Pressure-volume relations for gas, **3**: 435
 - Quantum numbers, **5**: 408
 - Reaction with tribromide ion, **7**: 234
 - Refractive index
 - Gas, **7**: 6
 - Liquid, **1**: 103; **7**: 11

Bromine.—(Continued)

- Solubility in
 - Hydrobromic acid, **3**: 403
 - Hydrochloric acid, **3**: 403
 - Mercuric bromide solution, **3**: 403; **4**: 266
 - Organic liquids, **3**: 261
 - Potassium bromide solution, **3**: 403; **4**: 266
 - Potassium sulfate solution, **3**: 403
 - Sodium chloride solution, **3**: 403
 - Sodium nitrate solution, **3**: 403
 - Sodium sulfate solution, **3**: 403
 - Strontium bromide solution, **3**: 403
 - Water, **3**: 255, 387; **7**: 234
- Sound, velocity of, in, **6**: 462
- Specific heat
 - Gas, **5**: 80, 81; **7**: 234
 - Liquid, **1**: 103; **5**: 94; **7**: 234
 - Solid, **1**: 103; **7**: 234
- Surface tension, **1**: 103; **4**: 447
- Thermal expansion, **1**: 102; **3**: 20
- Thermochemistry, **5**: 177
- Toxicology, **2**: 319
- Transmission of radiant energy, **5**: 269
- Vapor pressure, **3**: 201
- Viscosity
 - Gas, **1**: 102; **5**: 2
 - Liquid, **7**: 212
- X-ray absorption limits, **6**: 37
- X-ray emission spectra, **6**: 37
- X-ray series, limiting frequencies, **6**: 35
- X-ray wave-lengths, standard, **6**: 34
- X-rays, absorption coefficient, **6**: 13, 16
- X-rays, emission efficiency, **6**: 11
- Zeeman effect, **5**: 420
- Acetamide*
- Acetone*
- Aluminum bromide*
- Antimony pentabromide*
- Antimony pentachloride*
- Antimony tribromide*
- Arsenous bromide*
- Bismuth*
- Bromine iodide
 - Vapor pressure lowering, **3**: 300
- m-Bromobenzoic acid
 - Boiling point elevation, **3**: 324
- Bromoform
 - Distribution coefficients in water, **3**: 419
 - Vapor pressure lowering, **3**: 300
- Carbon disulfide
 - Distribution coefficients in potassium bromide solution, **3**: 419
 - Freezing point-solubility, **4**: 32
 - Specific heat, **5**: 125
- Carbon monoxide
 - Equilibrium constant of reaction, **7**: 244
- Carbon tetrabromide
 - Boiling point elevation, **3**: 324
 - Freezing point-solubility, **4**: 32
- Carbon tetrachloride
 - Density, **3**: 131
 - Distribution coefficients in water, **3**: 419
 - Freezing point lowering, **4**: 36
 - Vapor pressure, partial, **3**: 284
- Chlorine
 - Density, **3**: 131
 - Freezing point-solubility, **4**: 23
- Ethyl acetate
 - Freezing point-solubility, **4**: 32
- Ethyl alcohol
 - Freezing point solubility, **4**: 32
- Ethyl bromide
 - Freezing point-solubility, **4**: 32
- Ethyl ether
 - Freezing point-solubility, **4**: 33

* Data for system will be found under this compound in Index. Full explanation on page vii.

Bromine.—(Continued)

- Hydrogen
 - Photochemical reaction, 7: 164
 - Quantum sensitivity, 7: 168
 - Hydrogen bromide
 - Freezing point lowering, 4: 37
 - Freezing point-solubility, 4: 30
 - Iodine
 - Density, 3: 131
 - Freezing point-solubility, 4: 23
 - Vapor pressure, 3: 354
 - Iodine trichloride
 - Density, 3: 131
 - Mercuric bromide
 - Freezing point-solubility in water, 4: 266
 - Methyl alcohol
 - Freezing point-solubility, 4: 32
 - Nitric oxide
 - Freezing point-solubility, 4: 31
 - Nitrobenzene
 - Density, 3: 132
 - Nitrobenzene-Potassium bromide
 - Freezing point-solubility, 4: 268
 - Pentachloroethane
 - Distribution coefficients in water, 3: 419
 - Phosphorus pentabromide
 - Freezing point lowering, 4: 36
 - Potassium bromide
 - Density, aqueous solution, 3: 96
 - Freezing point-solubility in water, 4: 266
 - Selenium
 - Boiling point elevation, 3: 324
 - Sodium bromide
 - Density, aqueous solution, 3: 96
 - Stannic bromide
 - Boiling point elevation, 3: 324
 - Vapor pressure lowering, 3: 300
 - Sulfur
 - Boiling point elevation, 3: 324
 - Freezing point-solubility, 4: 23
 - Vapor pressure lowering, 3: 300
 - Sulfur dioxide
 - Freezing point-solubility, 4: 30
 - Sulfur monobromide
 - Freezing point lowering, 4: 36
 - Tellurium
 - Freezing point-solubility, 4: 23
 - Tetrachloroethane
 - Distribution coefficients in water, 3: 419
 - Trimethylammonium chloride
 - Density, 3: 132
 - Water
 - Freezing point-solubility, 4: 30
- Bromine iodide**
- Bromine*
- Bromoacenaphthene**
- Acenaphthene*
 - Chloroacenaphthene
 - Freezing point-solubility, 4: 160
 - Iodoacenaphthene
 - Freezing point-solubility, 4: 160
- Bromoacetic acid**
- Density, aqueous solution, 3: 113
 - Diffusion in methyl alcohol, 5: 72
 - Electrical conductivity, aqueous solution, 6: 262
 - Esterification constant, 7: 138
 - Heat of solution in water, 5: 148, 159
 - Hydrolysis, photochemical, 7: 169
 - Surface tension, aqueous solution, 4: 467
 - Carbon tetrachloride
 - Boiling point elevation, 3: 330
 - Chloroform
 - Boiling point elevation, 3: 331
 - Distribution coefficients in water, 3: 423
 - Dichloromethane
 - Boiling point elevation, 3: 332

Bromoacetic acid.—(Continued)

- Ethyl alcohol
 - Photochemical reaction, 7: 164
- Ethyl ether
 - Distribution coefficients in water, 3: 423
- Xylene
 - Distribution coefficients in water, 3: 423
- ω -Bromoacetophenone
 - Aniline*
- Bromoacetyl bromide**
 - Dielectric constant, 6: 84
 - Electrical conductivity, 6: 143
- α -Bromoallocinnamic acid
 - Ethyl alcohol
 - Density, 7: 81
 - Refractive index, 7: 81
 - Dispersion, 7: 103
- β -Bromoallocinnamic acid
 - Ethyl alcohol
 - Density, 7: 81
 - Refractive index, 7: 81
 - Dispersion, 7: 103
- Bromoaniline**
 - Diffusion in benzene, 5: 74
 - Diffusion in methyl alcohol, 5: 73
- o*-Bromoaniline
 - Absorption spectra, 5: 339
 - Isoamyl acetate
 - Density, 3: 182
 - Viscosity, 5: 47
- m*-Bromoaniline
 - Absorption spectra, 5: 339
 - Dielectric constant, 6: 90
 - Refractive index, 7: 38
 - Benzene*
- p*-Bromoaniline
 - Absorption spectra, 5: 339
 - Crystallography, 1: 326
 - Antimony tribromide*
 - Antimony trichloride*
 - Benzene*
 - Ethyl alcohol
 - Density, 3: 160
 - Isoamyl acetate
 - Density, 3: 182
 - Viscosity, 5: 47
- Bromoanisole (*o*-, *p*-)**
 - Absorption spectra, 5: 341
 - Refractive index, 7: 40
- Bromobenzene**
 - Absorption spectra, 5: 332, 338
 - Azeotropic mixtures, 3: 321
 - Birefringence, 7: 111, 113
 - Boiling point, 3: 220
 - Compressibility, 3: 39
 - Compressibility differences, 4: 15
 - Critical point data, 3: 246, 248
 - Density, 3: 29, 33
 - Dielectric constant, 6: 89, 105
 - Diffusion in benzene, 5: 74
 - Diffusion in methyl alcohol, 5: 72
 - Electrical conductivity, 6: 144
 - Flash point, 2: 161
 - Heat of vaporization, 5: 137
 - Magnetic susceptibility, 6: 362
 - Melting point under pressure, 4: 15
 - Orthobaric density, 3: 246
 - Polarization of light scattered by
 - Gas, 5: 266
 - Liquid, 5: 267
 - Refractive index, 7: 38
 - Specific heat, 5: 110
 - Surface tension, 4: 436, 453
 - Thermal conductivity, 5: 228
 - Vapor pressure, 3: 220
 - Vapor pressure above 1 atm., 3: 246
 - Verdet constant, 6: 429
 - Viscosity, 5: 33; 7: 217, 223
 - Volume change on melting, 4: 15

Bromobenzene.—(Continued)

- Acetic acid*
- Acetone*
- Antimony tribromide*
- Antimony trichloride*
- Benzene*
- Carbon disulfide
 - Density, 3: 145
 - Dielectric constant, 6: 101
- Carbon tetrachloride
 - Density, 3: 144
- Chlorobenzene
 - Density, 3: 174
 - Freezing point-solubility, 4: 127
 - Heat of solution, 5: 157
 - Specific heat, 5: 128
 - Surface tension, 4: 473
 - Vapor pressure, 3: 289
 - Viscosity, 5: 43
- Chloroform
 - Density, 3: 147
 - Viscosity, 5: 33
- p*-Dibromobenzene
 - Freezing point-solubility, 4: 175
- Diethyl tartrate
 - Density, 3: 174
- Diethylamine
 - Distribution coefficients in water, 3: 427
- Ethyl alcohol
 - Density, 3: 159
 - Aqueous solution, 3: 127
 - Miscibility in water, 3: 411, 424
- Fluorobenzene
 - Freezing point-solubility, 4: 127
- Iodobenzene
 - Freezing point-solubility, 4: 127
- Methyl alcohol
 - Density, aqueous solution, 3: 125
 - Miscibility in water, 3: 411
- Nitrophenol (*o*-, *p*-)
 - Freezing point-solubility, 4: 127
- Propyl alcohol
 - Density, aqueous solution, 3: 129
 - Miscibility in water, 3: 411
- Tetraethylammonium iodide
 - Density, 3: 174
- Toluene
 - Density, 3: 174
 - Surface tension, 4: 473
 - Viscosity, 5: 43
- p*-Bromobenzenesulfonic acid
 - Potassium hydroxide
 - Photochemical reaction, 7: 164
- o*-Bromobenzoic acid
 - Electrical conductivity, aqueous solution, 6: 278
 - Benzene*
- m*-Bromobenzoic acid
 - Electrical conductivity, aqueous solution, 6: 278
 - Bromine*
- p*-Bromobenzoic acid
 - Absorption spectra, 5: 340
 - Acetic acid*
 - Butyric acid
 - Boiling point elevation, 3: 340
 - Potassium hydroxide
 - Photochemical reaction, 7: 164
- 1-Bromobutylene**
 - Dielectric constant, 6: 87
- α -Bromobutyric acid
 - Dielectric constant, 6: 87
 - Electrical conductivity, aqueous solution, 6: 267
- γ -Bromobutyric acid, electrical conductivity, aqueous solution, 6: 267
- d*-Bromocamphor
 - Absorption spectra, 5: 346
 - Cryoscopic constant, 4: 184
 - Crystallography, 1: 330
 - Heat of fusion, 5: 134

* Data for system will be found under this compound in Index. Full explanation on page vii.

d-Bromocamphor.—(Continued)Optical rotatory power, **7**: 438Verdet constant, **6**: 430

-Acetone*

-Benzene*

-l-Bromocamphor

Freezing point-solubility, **4**: 158

-Camphor

Freezing point-solubility, **4**: 159

-Ethyl acetate

Density, **3**: 167; **7**: 83Refractive index, **7**: 83

-Ethyl alcohol

Density, **3**: 161; **7**: 81Refractive index, **7**: 81

-Ethyl bromide

Boiling point elevation, **3**: 336

-Isobutyl bromide

Boiling point elevation, **3**: 341

-Methyl alcohol

Boiling point elevation, **3**: 334Density, **3**: 152

-Naphthalene

Freezing point-solubility, **4**: 155

-Phenyl salicylate

Freezing point-solubility, **4**: 159

-Propyl bromide

Boiling point elevation, **3**: 340

-Tristearin

Density, **3**: 194Freezing point-solubility, **4**: 159**2-Bromo-4-chloroacetanilide**

-4-Bromo-2-chloroacetanilide

Freezing point-solubility, **4**: 153**4-Bromo-2-chloroacetanilide**

-2, 4-Dibromoacetanilide

Freezing point-solubility, **4**: 153

-2, 4-Dichloroacetanilide

Freezing point-solubility, **4**: 153**o-Bromochlorobenzene**Heat of fusion, **5**: 132

Specific heat

Liquid, **5**: 109Solid, **5**: 102-Bromochlorobenzene (*m*-, *p*-)Freezing point-solubility, **4**: 168, 175**m-Bromochlorobenzene**Heat of fusion, **5**: 132

Specific heat

Liquid, **5**: 109Solid, **5**: 102

-o-Bromochlorobenzene*

p-BromochlorobenzeneCryoscopic constant, **4**: 183Heat of fusion, **5**: 132Specific heat, **5**: 102Vapor pressure, **3**: 208

-o-Bromochlorobenzene*

-p-Dibromobenzene

Freezing point-solubility, **4**: 122, 168

-p-Dichlorobenzene

Freezing point-solubility, **4**: 122, 168**1-Bromo-1-chloroethane**Boiling point, **3**: 216Cryoscopic constant, **4**: 183Vapor pressure, **3**: 216**1-Bromo-2-chloroethane**Azeotropic mixtures, **3**: 319**1-Bromo-4-chloro-2-nitrobenzene**

-1-Bromo-4-chloro-3-nitrobenzene

Freezing point-solubility, **4**: 117 **α -Bromocinnamic acid**Electrical conductivity, aqueous solution, **6**: 289

-Ethyl alcohol

Density, **7**: 81Refractive index, **7**: 81Dispersion, **7**: 103 **β -Bromocinnamic acid**Electrical conductivity, aqueous solution, **6**: 289 **β -Bromocinnamic acid.**—(Continued)

-Ethyl alcohol

Density, **7**: 81Refractive index, **7**: 81Dispersion, **7**: 103 **α -Bromocinnamic aldehyde**- α -Chlorocinnamic aldehydeFreezing point-solubility, **4**: 154**1-Bromo-2, 2-dichloroethane**Verdet constant, **6**: 428**4-Bromo-1, 2-dinitrobenzene**Surface tension, **4**: 453**Bromodinitromesitylene**Crystallography, **1**: 328

-Acetonitrile*

BromoethyleneSpecific heat, gas, **5**: 80Verdet constant, **6**: 428**Bromoform**Absorption spectra, **5**: 331, 334Azeotropic mixtures, **3**: 318Birefringence, **7**: 110Compressibility, **3**: 35Cryoscopic constant, **4**: 183, 215Dielectric constant, **6**: 83Diffusion in benzene, **5**: 74Diffusion in ethyl alcohol, **5**: 73Diffusion in methyl alcohol, **5**: 72Diffusion in organic liquids, **5**: 75Electrical conductivity, **6**: 143Faraday effect, lag in, **6**: 434Internal pressure, **4**: 19Magnetic susceptibility, **6**: 361Melting point under pressure, **4**: 13Refractive index, **7**: 34, 78Solubility of salts in, **4**: 206Surface tension, **4**: 436, 448Vapor pressure, **3**: 215Verdet constant, **6**: 428Viscosity, liquid, **7**: 213Volume change on melting, **4**: 13

-Acetic acid*

-Acetone*

-Ammonia*

-Benzene*

-Benzene*-Iodoform

-Bromine*

-Chloroacetic acid

Distribution coefficients in water, **3**: 423

-Chloroform

Refractive index, **7**: 78

-Diethyl tartrate

Density, **3**: 146

-Ethyl alcohol

Density, **3**: 146Viscosity, **5**: 32

-Ethyl ether

Density, **3**: 146Vapor pressure, **3**: 286Viscosity, **5**: 32

-Formic acid

Distribution coefficients in water, **3**: 422Solubility, mutual, **3**: 395

-Iodine

Distribution coefficients in water, **3**: 420Freezing point lowering, **4**: 38Freezing point-solubility, **4**: 33

-Iodoform

Density, **3**: 146

-Iodoform-Xylene

Density, **3**: 197

-Isoamyl alcohol

Density, **3**: 146Viscosity, **5**: 32

-Methyl acetate

Vapor pressure, **3**: 286

-Methyl alcohol

Density, **3**: 146Viscosity, **5**: 32**Bromoform.**—(Continued)

-Methylene iodide

Density, **3**: 146

-Nitrobenzene

Density, **3**: 146Viscosity, **5**: 32

-Phenol

Distribution coefficients in water, **3**: 428

-Picric acid

Distribution coefficients in water, **3**: 427

-Propyl alcohol

Density, **3**: 146Viscosity, **5**: 32

-Sulfur

Freezing point lowering, **4**: 37

-Toluene

Freezing point-solubility, **4**: 172Heat of solution, **5**: 155**Bromohemin (α and β)**Absorption spectra, ultra-violet **5**: 379**o-Bromiodobenzene**Heat of fusion, **5**: 132

Specific heat

Liquid, **5**: 109Solid, **5**: 103**m-Bromiodobenzene**Heat of fusion, **5**: 132

Specific heat

Liquid, **5**: 109Solid, **5**: 103**p-Bromiodobenzene**Heat of fusion, **5**: 132Specific heat, **5**: 103

-p-Dibromobenzene

Freezing point-solubility, **4**: 122

-p-Diiodobenzene

Freezing point-solubility, **4**: 122**1-Bromoisobutyric acid**Dielectric constant, **6**: 87**1-Bromoisovaleric acid**Dielectric constant, **6**: 88 **α -Bromolignoceric acid**- α -Bromotetracosanic acidFreezing point-solubility, **4**: 167 **α -Bromonaphthalene**Absorption spectra, ultra-violet, **5**: 345, 363Birefringence, **7**: 111, 113Boiling point, **3**: 226Dielectric absorption, **6**: 95Dielectric constant, **6**: 95Diffusion in benzene, **5**: 74Diffusion in ethyl alcohol, **5**: 74Diffusion in methyl alcohol, **5**: 73Electrical conductivity, **6**: 144Emission, spectral, **5**: 257Magnetic susceptibility, **6**: 363Melting point, **4**: 6Refractive index, **7**: 12, 49Surface tension, **4**: 437, 459Vapor pressure, **3**: 226Verdet constant, **6**: 427Dispersion, **6**: 433

-Acetic acid*

-Antimony tribromide*

-Antimony trichloride*

-Carbon disulfide

Density, **3**: 146

-Carbon tetrachloride

Birefringence, magnetic, **7**: 112

-Cyclohexane

Birefringence, magnetic, **7**: 112

-Diethyl tartrate

Density, **3**: 192

-Ethyl alcohol

Density, **3**: 161Solubility in water, **3**: 405Viscosity, **5**: 38

α -Bromonaphthalene.—(Continued)

- Ethyl ether*
 - Density, **3**: 168
 - Dielectric constant, **6**: 102
- Ethyl nitrate*
 - Density, **3**: 158; **7**: 81
 - Refractive index, **7**: 81
 - Dispersion, **7**: 103
- Heptane*
 - Density, **3**: 190; **7**: 86
 - Dielectric constant, **6**: 103
 - Refractive index, **7**: 86
 - Dispersion, **7**: 105
- Isobutyl alcohol*
 - Solubility, mutual, **3**: 397
- Methyl alcohol*
 - Solubility, mutual, **3**: 397
- Phenyl thiocyanate*
 - Density, **3**: 186
- Picric acid*
 - Freezing point-solubility, **4**: 120
- Styphnic acid*
 - Freezing point-solubility, **4**: 122
- β -Bromonaphthalene**
 - Absorption spectra, ultra-violet, **5**: 345, 363
 - Cryoscopic constant, **4**: 184
 - Specific heat, **5**: 104
- Picric acid*
 - Freezing point-solubility, **4**: 120
- Styphnic acid*
 - Freezing point-solubility, **4**: 122
- Toluene*
 - Specific heat, **5**: 128
- Bromonitrobenzene**
 - Diffusion in benzene, **5**: 74
 - Diffusion in methyl alcohol, **5**: 72
- o*-Bromonitrobenzene**
 - Cryoscopic constant, **4**: 183
 - Surface tension, **4**: 453
 - Aluminum bromide**
 - Aluminum chloride**
 - Benzene**
 - Bromonitrobenzene (m-, p-)*
 - Freezing point-solubility, **4**: 175
 - o*-Chloronitrobenzene
 - Freezing point-solubility, **4**: 122
- m*-Bromonitrobenzene**
 - Cryoscopic constant, **4**: 183
 - Crystallization velocity, **5**: 61
 - Refractive index, **7**: 38
 - Surface tension, **4**: 453
 - Aluminum bromide**
 - Aluminum chloride**
 - Benzene**
 - o*-Bromonitrobenzene*
 - p*-Bromonitrobenzene
 - Freezing point-solubility, **4**: 175
 - m*-Chloronitrobenzene
 - Freezing point-solubility, **4**: 122
 - m*-Fluoronitrobenzene
 - Freezing point-solubility, **4**: 122
 - m*-Iodonitrobenzene
 - Freezing point-solubility, **4**: 123
- p*-Bromonitrobenzene**
 - Cryoscopic constant, **4**: 183
 - Surface tension, **4**: 453
 - Aluminum bromide**
 - Aluminum chloride**
 - Benzene**
 - Bromonitrobenzene (o-, m-)**
 - p*-Chloronitrobenzene
 - Freezing point-solubility, **4**: 123
- 3-Bromo-2-nitrobenzoic acid**
 - 5*-Bromo-2-nitrobenzoic acid
 - Freezing point-solubility in water, **4**: 418
- Bromonitrocamphor**
 - Verdet constant, **6**: 430
- Bromonitromethane**
 - Surface tension, **4**: 448

- Bromopentammine cobaltic dibromide**
 - Solubility in aqueous solutions, **7**: 328
- Bromopentammine cobaltic dichloride**
 - Solubility in aqueous solutions, **7**: 328
- Bromophenol**
 - Diffusion in benzene, **5**: 74
 - Diffusion in methyl alcohol, **5**: 72
 - Specific heat
 - Liquid, **5**: 110
 - Solid, **5**: 103
- o*-Bromophenol**
 - p*-Bromophenol
 - Freezing point-solubility, **4**: 176
 - m*-Bromophenol, surface tension, **4**: 453
- p*-Bromophenol**
 - Absorption spectra, **5**: 338
 - Cryoscopic constant, **4**: 183
 - Heat of fusion, **5**: 133
 - Heat of solution in water, **5**: 149
 - Surface tension, **4**: 453
 - o*-Bromophenol*
- p*-Bromophenyldimethylallylammonium bromide**
 - Decomposition, kinetics of, **7**: 125
- Bromoplatinic acid**
 - Heat of formation, **5**: 189
- α -Bromopropionic acid**
 - Dielectric constant, **6**: 85
 - Diffusion in methyl alcohol, **5**: 72
 - Electrical conductivity, aqueous solution, **6**: 264
 - Optical rotatory power, **7**: 365
 - Chloroform*
 - Distribution coefficients in water, **3**: 425
 - Ethyl ether*
 - Distribution coefficients in water, **3**: 425
 - Xylene*
 - Distribution coefficients in water, **3**: 425
- β -Bromopropionic acid**, electrical conductivity, aqueous solution, **6**: 264
- α -Bromopropylene**
 - Azeotropic mixtures, **3**: 320
 - Verdet constant, **6**: 428
- 3-Bromopropylene**
 - Dielectric constant, **6**: 82
 - Diffusion in methyl alcohol, **5**: 72
 - Surface tension, **4**: 449
 - Verdet constant, **6**: 428
 - Viscosity, **7**: 214
- Bromosilicane**
 - Density, **3**: 23
 - Vapor pressure
 - Liquid, **3**: 214
 - Solid, **3**: 207
- Bromosuccinic acid**
 - Electrical conductivity, aqueous solution, **6**: 265
 - Optical rotatory power, **7**: 369
 - Chlorosuccinic acid*
 - Freezing point-solubility, **4**: 113
 - Ethyl alcohol*
 - Photochemical reaction, **7**: 164
 - Ethyl ether*
 - Distribution coefficients in water, **3**: 426
 - Xylene*
 - Distribution coefficients in water, **3**: 426
- α -Bromotetracosanic acid**
 - α -Bromolignoceric acid*
- Bromotoluene**
 - Ethyl alcohol*
 - Density, aqueous solution, **3**: 127
 - Miscibility in water, **3**: 411
 - Propyl alcohol*
 - Density, aqueous solution, **3**: 129
 - Miscibility in water, **3**: 411

- o*-Bromotoluene**
 - Absorption spectra, **5**: 341
 - Azeotropic mixtures, **3**: 319, 321, 322
 - Dielectric constant, **6**: 91
 - Surface tension, **4**: 437, 456
 - Verdet constant, **6**: 429
 - p*-Bromotoluene
 - Freezing point-solubility, **4**: 179
- p*-Bromotoluene**
 - Azeotropic mixtures, **3**: 319, 322
 - Cryoscopic constant, **4**: 183
 - Density, **3**: 29, 33
 - Dielectric constant, **6**: 91
 - Heat of fusion, **5**: 133
 - Melting point under pressure, **4**: 10
 - Surface tension, **4**: 456
 - Verdet constant, **6**: 429
 - Benzene**
 - o*-Bromotoluene*
 - p*-Dibromobenzene
 - Freezing point-solubility, **4**: 123
 - Ethyl succinimide*
 - Freezing point-solubility, **4**: 144
 - Ethylene bromide*
 - Freezing point-solubility, **4**: 173
 - Phenol*
 - Freezing point-solubility, **4**: 136
 - Thymol*
 - Freezing point-solubility, **4**: 149
 - Tribenzylamine*
 - Freezing point-solubility, **4**: 149
 - Trimethylcarbinol*
 - Freezing point-solubility, **4**: 116
 - Veratrole*
 - Freezing point-solubility, **4**: 149
 - p*-Xylene
 - Freezing point-solubility, **4**: 149
- Bromotrichloromethane**
 - Photochemical reactions, **7**: 169
- Bromo-*p*-xylene**
 - Refractive index, **7**: 43
 - Quinoline*
 - Density, **7**: 86
 - Refractive index, **7**: 86
 - Dispersion, **7**: 105
- Bromural**
 - Absorption spectra, ultra-violet, **5**: 367
- Bromyrite**
 - Density, **1**: 123
 - Refractive index, **1**: 123, 165
 - See also Silver bromide.
- Bronze**, **2**: 372, 475, 476, 557, 566, 601
 - Acid, **2**: 370, 561, 562, 567
 - Acoustic resistivity, **6**: 459
 - Admiralty, **2**: 370, 566, 567, 570–572
 - Mechanical properties, **2**: 565
 - Ajax, **2**: 370, 561, 562, 567
 - Aluminum
 - Density, **2**: 576
 - Endurance limits, **2**: 601, 606
 - Hardness, **2**: 582
 - Mechanical properties, **2**: 572
 - Thermal conductivity, **5**: 222, 223
 - Bearing, mechanical properties, **2**: 562
 - Electrical conductivity, **6**: 171, 172
 - Endurance limits, **2**: 600, 601, 606
 - Impact hardness, **2**: 564
 - Lead, hardness, **2**: 567
 - List of, **2**: 389
 - Manganese, thermal conductivity, **5**: 223
 - Mechanical properties, **2**: 559
 - Phosphor
 - British specifications, **2**: 387
 - Mechanical properties, **2**: 560
 - Thermal conductivity, **5**: 224
- Red**
 - Antimony, effect of, **2**: 568
 - Lead, effect of, **2**: 569
 - Leaded, antimony, effect of, **2**: 569
 - Sound, velocity of, in, **6**: 459
 - Valve, mechanical properties, **2**: 567

* Data for system will be found under this compound in Index. Full explanation on page vii.

Bronze.—(Continued)

Zinc

- Lead, effect of, **2**: 566
- Mechanical properties, **2**: 563

Bronze powder, **2**: 373**Bronze wire**, **2**: 373, 565**Brookite**

- Density, **1**: 113
- Refractive index, **1**: 113, 173; **7**: 20
- Thermal expansion, **3**: 43
- See also Titanium dioxide.

Brown factice, rubber, effect on, **2**: 289**Brucine**

- Absorption spectra, **5**: 334, 355
- Diffusion in ethyl alcohol, **5**: 74
- Electrical conductivity, aqueous solution, **6**: 302
- Heat of combustion, **5**: 168
- Optical rotatory power, **7**: 473

Brucine d-tartrate

- Brucine l-tartrate*
- Freezing point-solubility in water, **4**: 376

Brucite

- Density, **1**: 141
- Heat of formation, **5**: 195
- Refractive index, **1**: 141, 166
- Specific heat, **5**: 99
- See also Magnesium hydroxide.

Brugnatellite

- Density, **1**: 142
- Refractive index, **1**: 142, 166

Brushite

- Density, **1**: 143
- Refractive index, **1**: 143, 170

Buffer solutions, **1**: 81**Bufootalin**, optical rotatory power, **7**: 475**Building stones**

- Physical properties, **2**: 47
- Sound, velocity of, in, **6**: 465

Building tile, hollow, **2**: 65**Bulbocapnine**

- Crystallography, **1**: 335
- Optical rotatory power, **7**: 475, 476

Bulk modulus

- Conversion factors, **1**: 24
- Definition, **1**: 34
- Magnetic field, effect of, on, **6**: 439

Bunsen cell, **6**: 318**Bunsen flames**

- Electrical properties, **6**: 156
- Filter for, **5**: 272

Bunsenite

- Density, **1**: 131
- Refractive index, **1**: 131, 166
- See also Nickelous oxide.

Burr metal, **2**: 373; cf. 469, 555**Bustamite**, refractive index, **1**: 145, 172**Butane**

- Absorption spectra, **5**: 332
- Boiling point, **3**: 219
- Critical point data, **3**: 244, 248
- Density, liquid, **3**: 28
- Electrical ignition, **2**: 175
- Flame propagation in, **2**: 184
- Heat of vaporization, **5**: 137
- Ignition temperature, **2**: 174
- Inflammability, limits of, **2**: 179
- Ionization by α -particles, **6**: 122
- Polarization of light scattered by, **5**: 266
- Solubility in non-aqueous liquids, **3**: 269
- Solubility in water, **3**: 260
- Specific heat, **5**: 108
- Vapor pressure, **3**: 219
- Vapor pressure above 1 atm., **3**: 244
- Viscosity
 - Gas, **5**: 3
 - Liquid, **7**: 215
- Aniline**
- Benzene**

Butane.—(Continued)-*Ethyl alcohol*

- Solubility, mutual, **3**: 395

-*Heptane*

- Vapor pressure, **3**: 289

-*Methyl alcohol*

- Solubility, mutual, **3**: 397
- Vapor pressure, **3**: 360

-*Nitrobenzene*

- Solubility, mutual, **3**: 397

-*Pentane*

- Vapor pressure, **3**: 289

Butan- β -ol hexoate, viscosity, **7**: 221**Butt brass**, **2**: 373; cf. 555, 602**Button alloy**, **2**: 373; cf. 555, 556, 601**Button brass**, **2**: 373; cf. 465, 555**Butyl acetate**

- Absorption spectra, **5**: 340
- Azeotropic mixtures, **3**: 321
- Critical temperature, **3**: 249
- Dielectric constant, **6**: 91
- Diffusion of vapor in air, **5**: 62
- Heat of vaporization, **5**: 137

-*Benzene**-*Ethyl alcohol*

- Miscibility in water, **3**: 412

-*Xylene*

- Density, **3**: 185

d- β -Butyl acetate-*Carbon disulfide*

- Density, **3**: 145

sec.-Butyl acetate, density, **3**: 29**Butyl alcohol**

- Absorption spectra, **5**: 332, 337
- Azeotropic mixtures, **3**: 318–321
- Birefringence, electric, **7**: 111
- Boiling point, **3**: 219
- Compressibility, **3**: 36
- Critical point data, **3**: 248
- Density, **3**: 28, 33
- Aqueous solution, **3**: 112, 113
- Dielectric absorption, **6**: 87
- Dielectric constant, **6**: 87
- Diffusion in water, **5**: 70
- Diffusion of vapor in gases, **5**: 62
- Flash point, **2**: 161
- Freezing point lowering of aqueous solution, **4**: 262
- Heat of combustion, **5**: 164
- Heat of fusion, **5**: 132
- Heat of vaporization, **5**: 137
- Magnetic susceptibility, **6**: 361
- Polarization of light reflected from, **5**: 261
- Polarization of light scattered by
 - Gas, **5**: 266
 - Liquid, **5**: 266
- Refractive index, **7**: 12, 36
- Solubility in water, **3**: 388
- Solubility of salts in, **4**: 209
- Sound, velocity of, in vapor, **6**: 463
- Specific heat, **5**: 108
- Surface tension, **4**: 451
- Aqueous solution, **4**: 468
- Thermal conductivity, **5**: 228
- Pressure, effect of, **5**: 227
- Vapor pressure, **3**: 219
- Verdet constant, **6**: 427
- Dispersion, **6**: 434
- Viscosity, **5**: 41; **7**: 215, 223
- Acenaphthene**
- Acetone**
- Air**
- Ammonium perchlorate**
- Barium perchlorate**
- Benzene**
- Calcium perchlorate*
- Density, **3**: 140
- Cesium perchlorate*
- Density, **3**: 142

Butyl alcohol.—(Continued)-*Decahydronaphthalene*

- Density, **3**: 167
- Viscosity, **5**: 41

-*Diethyl tartrate*

- Density, **7**: 83
- Refractive index, **7**: 83

-*Diethylamine*

- Distribution coefficients in water, **3**: 426

-*Ethane*

- Vapor pressure, **3**: 360

-*Ethyl alcohol*

- Miscibility in water, **3**: 412

-*Hydrogen chloride*

- Density, **3**: 135

-*Isopropyl alcohol*

- Miscibility in water, **3**: 412

-*Lithium chloride*

- Density, **3**: 140

-*Lithium perchlorate*

- Density, **3**: 141

-*Magnesium perchlorate*

- Density, **3**: 140

-*Naphthalene*

- Freezing point-solubility, **4**: 115

- β -*Naphthylamine*

- Freezing point-solubility, **4**: 115

-*Potassium perchlorate*

- Density, **3**: 142

-*Rubidium perchlorate*

- Density, **3**: 142

-*Sodium chloride*

- Density, **3**: 141

-*Sodium perchlorate*

- Density, **3**: 141

-*Strontium perchlorate*

- Density, **3**: 140

-*Tetrahydronaphthalene*

- Density, **3**: 167

- Viscosity, **5**: 41

sec.-Butyl alcohol

- Absorption spectra, **5**: 332
- Azeotropic mixtures, **3**: 318, 321
- Boiling point, **3**: 219
- Critical temperature, **3**: 248
- Density, aqueous solution, **3**: 114
- Dielectric absorption, **6**: 87
- Dielectric constant, **6**: 87
- Heat of vaporization, **5**: 137
- Optical rotatory power, **7**: 362
- Solubility in water, **3**: 388
- Pressure, effect of, **3**: 393
- Surface tension, **4**: 451
- Verdet constant, dispersion of, **6**: 434

tert.-Butyl alcohol

- Absorption spectra, **5**: 332, 337
- Azeotropic mixtures, **3**: 318–319, 321, 324
- Birefringence, electric, **7**: 111
- Boiling point, **3**: 219, 342
- Compressibility, **3**: 36
- Critical temperature, **3**: 248
- Cryoscopic constant, **4**: 183
- Dielectric absorption, **6**: 87
- Dielectric constant, **6**: 87
- Heat of fusion, **5**: 132
- Heat of vaporization, **5**: 137
- Magnetic susceptibility, **6**: 361
- Polarization of light scattered by, **5**: 266
- Surface tension, **4**: 451
- Aqueous solution, **4**: 468
- Verdet constant, dispersion of, **6**: 434
- Viscosity, **7**: 216
- p-Dibromobenzene*
- Boiling point elevation, **3**: 342
- Magnesium bromide*
- Freezing point-solubility, **4**: 203
- Thiourea*
- Boiling point elevation, **3**: 342
- Thiourea-Urea*
- Boiling point elevation, **3**: 349

Butyl benzoate

Compressibility, **3**: 37
Verdet constant, **6**: 430

Butyl bromide

Azeotropic mixtures, **3**: 321
Boiling point, **3**: 219
Dielectric constant, **6**: 87
Viscosity, **7**: 223

-Acetic acid***-Diethylamine**

Distribution coefficients in water, **3**: 426

tert.-Butyl bromide

Azeotropic mixtures, **3**: 321
Dielectric constant, **6**: 87
Verdet constant, **6**: 428

Butyl butyrate

Absorption spectra, **5**: 333
Compressibility, **3**: 37
Specific heat, **5**: 112

d-sec.-Butyl butyrate, density, 3: 29**Butyl chloride**

Dielectric constant, **6**: 82, 87
Specific heat, **5**: 108

tert.-Butyl chloride

Surface tension, **4**: 436, 451
Verdet constant, **6**: 428

Butyl cyanoacetate, surface tension, 4: 457 **β -Butyl esters**

Optical rotatory power, **7**: 360

Butyl ether

Absorption spectra, **5**: 333
-Diethylamine
Distribution coefficients in water, **3**: 427

Butyl formate

Absorption spectra, **5**: 332
Dielectric constant, **6**: 88
Flash point, **2**: 162
Heat of vaporization, **5**: 137
Specific heat, **5**: 109
Viscosity, **7**: 216
-Ethyl alcohol
Miscibility in water, **3**: 412

Butyl iodide

Dielectric constant, **6**: 87
Heat of vaporization, **5**: 137
Refractive index, **7**: 36

tert.-Butyl iodide

Dielectric constant, **6**: 87
-Chloroform
Boiling point elevation, **3**: 331

Butyl isothiocyanate

Surface tension, **4**: 452

Butyl nitrite

Absorption spectra, **5**: 332
Surface tension, **4**: 451

Butyl propionate

Heat of vaporization, **5**: 137
Specific heat, **5**: 111

d-sec.-Butyl propionate, density, 3: 29**Butyl valerate**

Compressibility, **3**: 37
Specific heat, **5**: 112

Butylamine

Absorption spectra, **5**: 332
Density, aqueous solution, **3**: 114
Dielectric constant, **6**: 88
Diffusion of vapor in air, **5**: 62
Heat of combustion, **5**: 167
Surface tension, **4**: 451
-Viscosity
Gas, **5**: 4
Liquid, **7**: 216
-Ethyl ether
Distribution coefficients in water, **3**: 426
-Xylene
Distribution coefficients in water, **3**: 426

sec.-Butylamine

Electrical conductivity, aqueous solution, **6**: 268

Heat of combustion, **5**: 167
Optical rotatory power, **7**: 363
Refractive index, **7**: 36

tert.-Butylamine

Electrical conductivity, aqueous solution, **6**: 268
Heat of combustion, **5**: 167
Refractive index, **7**: 36
Surface tension, **4**: 451

Butylamine hydrochloride

Density, aqueous solution, **3**: 114

Butylbenzene, viscosity, 7: 221**sec.-Butylbenzene, flash point, 2: 161****tert.-Butylbenzene**

Absorption spectra, **5**: 346
Compressibility, **3**: 37
Dielectric constant, **6**: 95
Heat of combustion, **5**: 163

Butylchloral, dielectric constant, 6: 86**Butylcoumaric acid**

Heat of combustion, **5**: 166

Butylene

Dielectric constant, **6**: 82
Inflammability, limits of, **2**: 179

Butylene bromide

Electrical conductivity, **6**: 143

Butylethylene

Boiling point, **3**: 222
Vapor pressure, **3**: 222

Butyltrimethyllead

Boiling point, **1**: 116, 163
Density, **1**: 116
Refractive index, **1**: 116, 165

Butyraldehyde

Absorption spectra, **5**: 332, 337
Dielectric constant, **6**: 87
Magnetic susceptibility, **6**: 361
Refractive index, **7**: 36
Solubility in water, **3**: 387
Surface tension, aqueous solution, **4**: 463

Butyramide

Boiling point elevation in aqueous solution, **3**: 327
Density, aqueous solution, **3**: 114
Heat of combustion, **5**: 167
Viscosity, aqueous solution, **5**: 23
-Acetone*
-Benzene*
-Chloroform
Boiling point elevation, **3**: 331
-Ethyl alcohol
Boiling point elevation, **3**: 336
Density, **3**: 159

Butyric acid

Absorption spectra, **5**: 332, 337
Azeotropic mixtures, **3**: 318, 321
Boiling point, **3**: 219, 340
Condensation on ions and nuclei, **6**: 117
Critical point data, **3**: 240, 248
Density, **3**: 28
Aqueous solution, **3**: 112-114
Dielectric constant, **6**: 87
Diffusion in water, **5**: 70
Diffusion of vapor in gases, **5**: 62
Electrical conductivity, aqueous solution, **6**: 267
Esterification constant, **7**: 138
Freezing point lowering of aqueous solution, **4**: 262
Heat of combustion, **5**: 165
Heat of fusion, **5**: 132
Heat of solution in water, **5**: 149
Heat of vaporization, **5**: 137
Heat of wetting by, **5**: 142
Magnetic susceptibility, **6**: 361
Orthobaric density, **3**: 240
Polarization of light scattered by, **5**: 266
Refractive index, **7**: 12, 36

Butyric acid.—(Continued)

Solubility in water, **3**: 388
Sound, velocity of, in vapor, **6**: 463
Specific heat, **5**: 108
Aqueous solution, **5**: 124
Surface tension, **4**: 451
Aqueous solution, **4**: 468
Thermal conductivity, **5**: 228
Vapor pressure, **3**: 219
Aqueous solution, **3**: 291
Verdet constant, dispersion of, **6**: 434
Viscosity
Aqueous solution, **5**: 20
Liquid, **5**: 33; **7**: 215
X-ray diffraction bands, **1**: 352
-Acetic acid*
-Acetic acid*-Capric acid
-Acetic acid*-Valeric acid
-Acetone*
-Ammonium acetate*
-Ammonium butyrate*
-Ammonium formate*
-Aniline*
-Benzanilide*
-Benzene*
-Benzil*
-p-Bromobenzoic acid*
-Camphor
Density, **3**: 166
-Carbon disulfide
Vapor pressure, **3**: 286
-Chloroform
Distribution coefficients in water, **3**: 426
Vapor pressure, **3**: 286
-Diphenylamine
Boiling point elevation, **3**: 340
-Ethyl alcohol
Density, **3**: 159
-Ethyl ether
Distribution coefficients in water, **3**: 426
-Formamide
Density, **3**: 149
Freezing point-solubility, **4**: 100
Viscosity, **5**: 33
-Methyl acetate
Vapor pressure, **3**: 288
-Methyl alcohol
Density, **3**: 151; **7**: 79
Refractive index, **7**: 79
-Naphthalene
Freezing point-solubility, **4**: 115
Freezing point-solubility in water, **4**: 415
-Potassium acetate
Density, aqueous solution, **3**: 103
-Potassium butyrate
Density, aqueous solution, **3**: 103
-Potassium formate
Density, aqueous solution, **3**: 103
-Pyridine
Density, **3**: 165
Viscosity, **5**: 40
-Sodium acetate
Density, aqueous solution, **3**: 102
-Sodium butyrate
Boiling point elevation, **3**: 340
Density, aqueous solution, **3**: 102
-Sodium formate
Density, aqueous solution, **3**: 102
-Toluene
Density, **3**: 166
-Xylene
Distribution coefficients in water, **3**: 426
Butyric anhydride
Dielectric constant, **6**: 94
Butyric anilide
Transition temperature, **4**: 8

* Data for system will be found under this compound in Index. Full explanation on page vii.

Butyronitrile

- Boiling point, **3**: 218
- Critical point data, **3**: 248
- Density, **3**: 28
- Dielectric constant, **6**: 87
- Electrical conductivity, **6**: 143
- Heat of combustion, **5**: 167
- Heat of vaporization, **5**: 137
- Hydrolysis, **7**: 141
- Magnetic susceptibility, **6**: 361
- Specific heat, **5**: 108
- Surface tension, **4**: 436, 450

Butyrefractometer values

- Refractive index from, **2**: 212

Butyrylphenylacetylene

- Magnetic susceptibility, **6**: 363
- Verdet constant, **6**: 430

C.M.A. bearing metal, 2: 374; cf. 556**Cacodyl**, magnetic susceptibility, **6**: 361**Cacodylic acid**

- Electrical conductivity, aqueous solution, **6**: 263
- Magnetic susceptibility, **6**: 361

Cacoxenite

- Density, **1**: 129
- Refractive index, **1**: 129, 166

Cadaverine hydrochloride

- Absorption spectra, ultra-violet, **5**: 370

Cadinene, optical rotatory power, **7**: 461**Cadmium**

- Absorption, index of, **5**: 249
- Accommodation coefficient, **5**: 53
- Boiling point, **1**: 102; **3**: 205
- Cathodoluminescence, **5**: 387, 390
- Compressibility, **3**: 46, 48
- Condensation, irreversible, temperature of, **5**: 53, 54
- Contact potential, **6**: 57
- Corbino effect, **6**: 419
- Critical potentials, **6**: 70
- Density
 - Liquid, **1**: 102; **2**: 457, 463
 - Solid, **1**: 104; **2**: 456
- Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 104; **6**: 136-139
 - Low temperature, **6**: 126, 132
 - Magnetic field, effect of, **6**: 422
 - Single crystal, **6**: 126, 136
- Electrode potential, **6**: 319, 332; **7**: 256
- Electrons, absorption of, by vapor of, **6**: 61
- Electrons, transmitted, velocity of, **6**: 62
- Emission, spectral, **5**: 253, 255
- Emission spectra, **5**: 286
- Entropy, **5**: 88
- Ettingshausen effect, **6**: 419
- Fluorescence of vapors, **5**: 391
- Free energy
 - Electrode reaction, **7**: 256
 - Fusion, **7**: 256
 - Sublimation, **7**: 256
 - Vaporization, **7**: 256
- Hall effect, **6**: 416, 417
- Heat content, **5**: 88
- Heat of fusion, **1**: 104; **2**: 458
- Heat of vaporization, **1**: 102; **2**: 458
- Isotopes, **1**: 45
- Magnetic susceptibility, **6**: 354
- Magneton number, **6**: 346
- Mechanical properties, **2**: 548
- Melting point, **1**: 53, 104
- Nernst effect, **6**: 420
- Peltier coefficient, **6**: 227
- Persistent lines, **5**: 323
- Photoelectric threshold, **6**: 68
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 249
- Refractive index, **1**: 103
 - Gas, **7**: 6

Cadmium.—(Continued)

- Righi-Leduc effect, **6**: 421
- Solubility in cadmium chloride, **4**: 40
- Solution velocity in dissolved iodine, **5**: 56-58
- Solution velocity in salt solutions, **5**: 57, 58
- Sound, velocity of, in, **6**: 465
- Specific heat
 - Liquid, **1**: 103; **5**: 94; **7**: 256
 - Solid, **1**: 104; **5**: 85, 88, 93; **7**: 256
- Spectral series, **5**: 396
- Surface tension, **1**: 103; **4**: 439
- Thermal conductivity, **5**: 218, 220, 221
- Thermal expansion
 - Liquid, **1**: 102; **2**: 463
 - Solid, **1**: 104; **2**: 460
- Thermochemistry, **5**: 185
- Thermodynamic potential, **5**: 88
- Thermoelectric properties, **6**: 214, 225
- Thomson coefficient, **6**: 228
- Vapor pressure, **3**: 205
- Volume change on fusion, **2**: 474
- Viscosity, liquid, **5**: 6, 7
- X-ray absorption limits, **6**: 38
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 38
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption coefficient, **6**: 13
- Zeeman effect, **5**: 420
- Aluminum*-Copper-Magnesium
- Aluminum*-Copper-Magnesium-Manganese
- Aluminum*-Copper-Magnesium-Manganese-Zinc
- Aluminum*-Tin
- Aluminum*-Zinc
- Antimony*
- Arsenic*
- Bismuth*
- Bismuth*-Lead-Tin
- Bismuth*-Zinc
- Cadmium chloride
 - Electrical conductivity, **6**: 150, 197
- Calcium
 - Equilibrium diagram, **2**: 428
- Copper
 - Electrical conductivity, **6**: 166
 - Equilibrium diagram, **2**: 429
 - Hardness, **2**: 554
 - Mechanical properties, **2**: 548, 552
- Copper-Silver
 - Hardness, **2**: 584
 - Mechanical properties, **2**: 585
 - Mold shrinkage, **2**: 584
- Gold
 - Density, **2**: 548
 - Electrical conductivity, **6**: 164
 - Equilibrium diagram, **2**: 424
 - Hardness, **2**: 549, 586
 - Thermal conductivity, **5**: 223
 - Thermoelectric properties, **6**: 217
- Lead
 - Electrical conductivity, **6**: 167, 198
 - Equilibrium diagram, **2**: 414
 - Magnetic susceptibility, **6**: 365
 - Refraction, index of, **5**: 251
 - Thermal expansion (cubical), **2**: 474
 - Thermoelectric properties, **6**: 218
- Lead-Tin
 - Density, **2**: 551
 - Mechanical properties, **2**: 551
- Lead-Zinc
 - Miscibility relations, **3**: 408
- Lithium
 - Equilibrium diagram, **2**: 429
- Magnesium
 - Electrical conductivity, **6**: 166
 - Equilibrium diagram, **2**: 429
 - Hardness, **2**: 551
 - Mechanical properties, **2**: 544

Cadmium.—(Continued)**-Magnesium-Zinc**

- Equilibrium diagram, **2**: 447, 448

-Mercury

- Absorption, index of, **5**: 251
- Density, **2**: 551, 589, 590
- Electrical conductivity, **6**: 190
- Equilibrium diagram, **2**: 429
- Hardness, **2**: 586
- Refraction, index of, **5**: 251
- Solubility, pressure, effect of, **4**: 265
- Surface tension, **2**: 591
- Thermal conductivity, **5**: 224
- Thermoelectric properties, **6**: 218, 220
- Viscosity, liquid, **5**: 7
- See also Cadmium amalgams.

-Nickel

- Equilibrium diagram, **2**: 430

-Potassium

- Equilibrium diagram, **2**: 429

-Silver

- Density, **2**: 589
- Equilibrium diagram, **2**: 421
- Hardness, **2**: 548, 585
- Specific volume, **2**: 589
- Thermal conductivity, **5**: 222
- Thermoelectric properties, **6**: 215

-Sodium

- Electrical conductivity, **6**: 198
- Equilibrium diagram, **2**: 430

-Tellurium

- Equilibrium diagram, **2**: 430
- Freezing point-solubility, **4**: 28

-Thallium

- Electrical conductivity, **6**: 196
- Equilibrium diagram, **2**: 430
- Hardness, **2**: 551
- Thermal conductivity, **5**: 224

-Tin

- Electrical conductivity, **6**: 167
- Equilibrium diagram, **2**: 416
- Specific heat, **5**: 120
- Thermal conductivity, **5**: 224
- Thermal expansion, **2**: 474
- Thermoelectric properties, **6**: 218

-Zinc

- Compressibility, **2**: 548
- Electrical conductivity, **6**: 167
- Equilibrium diagram, **2**: 430
- Hardness, **2**: 549, 550, 551
- Mechanical properties, **2**: 546, 552
- Thermal conductivity, **5**: 224
- Thermal expansion, **2**: 474
- Thermoelectric properties, **6**: 218

Cadmium acetate

- Freezing point lowering of aqueous solution, **4**: 256

-Silver acetate

- Solubility in water, **7**: 323

Cadmium amalgams

- Electrode potentials, **7**: 256
- Partial vapor pressure, **3**: 284
- X-ray diffraction data, **1**: 348

-Mercuric oxide

- Electromotive force, **7**: 259

-Mercurous bromide

- Electromotive force, **7**: 260

-Mercurous chloride

- Electromotive force, **7**: 259

-Mercurous iodide

- Electromotive force, **7**: 260

-Mercurous sulfate

- Electromotive force, **7**: 260

-Silver chloride

- Electrode potential, **7**: 266

-Silver iodide

- Electromotive force, **7**: 268

Cadmium benzoate, ammines, decomposition pressure, **7**: 258**Cadmium bromate**

- Reflectivity, selective, **5**: 260

* Data for system will be found under this compound in Index. Full explanation on page vii.

Cadmium bromide**Ammine**

- Decomposition pressure, **7**: 257
- Heat of decomposition, **7**: 257
- Heat of formation, **5**: 186
- Concentration cell, **6**: 326
- Decomposition potential of hydrate, **7**: 257
- Decomposition pressure of hydrate, **7**: 257
- Density, aqueous solution, **3**: 65, 107; **7**: 70
- Electrical conductivity, aqueous solution, **6**: 234, 239
- Freezing point lowering of aqueous solution, **4**: 255
- Heat of formation, **5**: 185
- Magnetic susceptibility, **6**: 357
- Methylamine complex
- Decomposition pressure, **7**: 257
- Heat of decomposition, **7**: 257
- Photoelectric current, **6**: 69
- Refractive index, aqueous solution, **7**: 70
- Dispersion, **7**: 100
- Solubility in water, **4**: 222
- Transference number, **6**: 310
- Vapor pressure, aqueous solution, **3**: 366
- Vapor pressure lowering in aqueous solution, **3**: 294

-Acetone***-Aluminum bromide*****-Cadmium chloride**Freezing point-solubility, **4**: 55**-Cadmium iodide**Freezing point-solubility, **4**: 55**-Cuprous bromide**Freezing point-solubility, **4**: 55**-Ethyl alcohol**Density, **3**: 138Verdet constant, **6**: 427**-Lead bromide**Solubility in water, **7**: 317**-Piperidine**Boiling point elevation, **3**: 343**-Potassium bromide**Freezing point-solubility, **4**: 55**-Potassium bromide-Sodium bromide**Freezing point-solubility, **4**: 75, 80**-Quinoline**Boiling point elevation, **3**: 347**-Sodium bromide**Freezing point-solubility, **4**: 55**Cadmium carbonate**Decomposition pressure, **7**: 258Heat of decomposition, **7**: 258Heat of formation, **5**: 186**Cadmium cells, 6**: 313, 314**Cadmium cesium sulfate**Density, **1**: 161**Hydrate**Decomposition pressure, **7**: 311Heat of decomposition, **7**: 311Refractive index, **1**: 161, 169; **7**: 31Solubility in water, **4**: 244**Cadmium chlorate****Ammines**Decomposition pressure, **7**: 257Heat of decomposition, **7**: 257Density, aqueous solution, **3**: 65Electrical conductivity, aqueous solution, **6**: 244, 254Freezing point lowering of aqueous solution, **4**: 255Refractive index, aqueous solution, **7**: 70Solubility in water, **4**: 222Vapor pressure lowering in aqueous solution, **3**: 294**Cadmium chloride**Absorption spectra, **5**: 328**Cadmium chloride.—(Continued)****Ammines**

- Decomposition pressure, **7**: 257
- Heat of decomposition, **7**: 257
- Heat of formation, **5**: 186
- Boiling point elevation in aqueous solution, **3**: 325
- Compressibility, **3**: 50
- Concentration cells, **6**: 325
- Decomposition potential, **7**: 256
- Density
- Aqueous solution, **3**: 65, 107; **7**: 70
- Liquid, **3**: 23
- Solid, **1**: 120
- Electrical conductivity, **6**: 148
- Aqueous solution, **6**: 231, 232
- Free energy, **7**: 256
- Dehydration of hydrates, **7**: 256
- Freezing point lowering of aqueous solution, **4**: 255
- Heat of formation, **5**: 185
- Hydrolysis constant, **7**: 256
- Magnetic susceptibility, **6**: 357
- Melting point, **1**: 120
- Photoelectric current, **6**: 69
- Refractive index
- Aqueous solution, **7**: 70
- Dispersion, **7**: 100
- Solid, **1**: 120, 172
- Solubility in water, **4**: 221, 245
- Specific heat, **5**: 96
- Surface tension, aqueous solution, **4**: 464
- Transference number, **6**: 310
- Transition pressure of hydrate, **1**: 120
- Vapor pressure lowering in aqueous solution, **3**: 294
- Viscosity, aqueous solution, **5**: 14
- X-rays, absorption coefficient, **6**: 13
- Ammonium chloride*
- Amyl alcohol*
- Barium chloride*
- Beryllium chloride*
- Bismuth chloride*
- Cadmium*
- Cadmium bromide*
- Cadmium iodide
- Freezing point-solubility, **4**: 55
- Cadmium sulfate
- Freezing point-solubility, **4**: 55
- Calcium chloride
- Freezing point-solubility, **4**: 55
- Cobaltous chloride
- Boiling point elevation in aqueous solution, **3**: 347
- Cupric chloride
- Boiling point elevation in aqueous solution, **3**: 347
- Cuprous chloride
- Freezing point-solubility, **4**: 55
- Ethyl alcohol
- Verdet constant, **6**: 427
- Hydrogen chloride
- Density, aqueous solution, **3**: 95
- Viscosity, aqueous solution, **5**: 18
- Lead chloride
- Freezing point-solubility, **4**: 51
- Solubility in water, **7**: 315
- Magnesium chloride
- Freezing point-solubility, **4**: 55
- Manganese chloride
- Freezing point-solubility, **4**: 55
- Potassium chloride
- Electrical conductivity, **6**: 150
- Freezing point-solubility, **4**: 55
- Freezing point-solubility in water, **4**: 304, 385
- Potassium chloride-Sodium chloride
- Freezing point-solubility, **4**: 75, 80
- Potassium cyanide
- Density, aqueous solution, **3**: 98

Cadmium chloride.—(Continued)**-Quinoline**Boiling point elevation, **3**: 347**-Sodium chloride**Freezing point-solubility, **4**: 55Freezing point-solubility in water, **4**: 304, 385**-Stannous chloride**Freezing point-solubility, **4**: 49**-Strontium chloride**Freezing point-solubility, **4**: 55**-Thallium monochloride**Electrical conductivity, **6**: 150Freezing point-solubility, **4**: 53Solubility in water, **7**: 320**-Zinc chloride**Freezing point-solubility, **4**: 54**Cadmium cyanate**Heat of formation, **5**: 186**Cadmium cyanide**Heat of formation, **5**: 186**Cadmium dipotassium chloride**Refractive index, **7**: 28**Cadmium dithionate**Heat of formation, **5**: 186**Cadmium fluoride**Heat of formation, **5**: 185Solubility in water, **4**: 221X-ray diffraction data, **1**: 342**-Cadmium iodide**Freezing point-solubility, **4**: 55**-Sodium fluoride**Freezing point-solubility, **4**: 55**Cadmium formate**Density, aqueous solution, **3**: 66**Cadmium hydride, band spectra, 5**: 412**Cadmium hydroxide**Concentration cell, **6**: 325Heat of formation, **5**: 185Solubility in ammonium hydroxide, **7**: 258**Cadmium iodate****Ammine**Decomposition pressure, **7**: 257Heat of decomposition, **7**: 257**Cadmium iodide****Ammine**Decomposition pressure, **7**: 257Heat of decomposition, **7**: 257Heat of formation, **5**: 186Boiling point elevation in aqueous solution, **3**: 325Density, aqueous solution, **3**: 66; **7**: 70Electrical conductivity, aqueous solution, **6**: 235, 239Electrode potential, **7**: 257Freezing point lowering of aqueous solution, **4**: 256Heat of formation, **5**: 185Magnetic susceptibility, **6**: 357**Methylamine complex**Decomposition pressure, **7**: 257Heat of decomposition, **7**: 257Photoelectric current, **6**: 69Refractive index, aqueous solution, **7**: 70Dispersion, **7**: 100Solubility in mixed solvents, **4**: 211Solubility in water, **4**: 222Pressure, effect of, **4**: 265Specific heat, aqueous solution, **5**: 122Thermal expansion, **3**: 44Transference number, **6**: 310Vapor pressure, **3**: 214Vapor pressure lowering in aqueous solution, **3**: 294X-ray diffraction data, **1**: 342**-Acetone*****-Acetonitrile*****-Amyl alcohol*****-Aniline*****-Cadmium bromide***

* Data for system will be found under this compound in Index. Full explanation on page vii.

Cadmium iodide.—(Continued)

- Cadmium chloride*
- Cadmium fluoride*
- Cuprous iodide
 - Freezing point-solubility, 4: 55
- Diethyl sulfide
 - Boiling point elevation, 3: 342
- Ethyl acetate
 - Density, 3: 139
 - Freezing point-solubility, 4: 198
- Ethyl alcohol
 - Boiling point elevation, 3: 337, 338
 - Density, 3: 139; 7: 81
 - Freezing point-solubility, 4: 198
 - Refractive index, 7: 81
 - Verdet constant, 6: 427
- Ethyl ether
 - Distribution coefficients in water, 3: 421
 - Freezing point-solubility in water, 4: 415
- Ethyl formate
 - Freezing point-solubility, 4: 198
- Isopropyl alcohol
 - Freezing point-solubility, 4: 198
- Mercuric iodide
 - Freezing point-solubility, 4: 56
- Methyl acetate
 - Boiling point elevation, 3: 340
- Methyl alcohol
 - Density, 3: 139; 7: 79
 - Refractive index, 7: 79
- Methyl formate
 - Freezing point-solubility, 4: 198
- Methyl sulfide
 - Boiling point elevation, 3: 338
- Piperidine
 - Boiling point elevation, 3: 343
- Potassium iodide
 - Freezing point-solubility, 4: 56
- Propyl alcohol
 - Freezing point-solubility, 4: 198
- Propyl formate
 - Freezing point-solubility, 4: 198
- Pyridine
 - Boiling point elevation, 3: 342
 - Freezing point-solubility, 4: 198
- Quinoline
 - Boiling point elevation, 3: 347
 - Freezing point-solubility, 4: 198
- Sodium iodide
 - Freezing point-solubility, 4: 56
- Cadmium magnesium chloride**
 - Solubility in water, 4: 229
- Cadmium metasilicate**
 - Melting point, 4: 84
- Cadmium naphthalenesulfonate**
 - Ammine, decomposition pressure, 7: 258
- Cadmium nitrate**
 - Crystallization velocity, 5: 61
 - Density, aqueous solution, 3: 66, 107
 - Electrical conductivity, aqueous solution, 6: 237, 240
 - Freezing point lowering of aqueous solution, 4: 256
 - Heat of formation, 5: 186
 - Heat of fusion, 5: 131
 - Refractive index, aqueous solution, 7: 70
 - Solubility in water, 4: 222
 - Specific heat, 5: 96
 - Vapor pressure, aqueous solution, 3: 366
 - Vapor pressure lowering in aqueous solution, 3: 294
 - Viscosity, aqueous solution, 5: 14
- Cadmium orthosilicate**
 - Melting point, 4: 84
- Cadmium oxalate**, electrical conductivity, aqueous solution, 6: 258
- Cadmium oxide**
 - Electrical conductivity, 6: 153
 - Electrons, thermal emission of, 6: 54

Cadmium oxide.—(Continued)

- Heat of formation, 5: 185
- Magnetic susceptibility, 6: 357
- Photoelectric current, 6: 69
- Thermal conductivity, 5: 216
- Thermionic work function, 6: 54
- Thermoelectric power, 6: 224
- X-ray diffraction data, 1: 342
- Boric oxide*
- Cadmium oxybromide**
 - Heat of formation, 5: 185
- Cadmium oxychloride**
 - Heat of formation, 5: 185
- Cadmium oxyiodide**
 - Heat of formation, 5: 186
- Cadmium perchlorate**
 - Ammine, decomposition pressure, 7: 257
 - Hydrate, decomposition pressure, 7: 257
- Cadmium phosphate**, luminescence, 5: 389
- Cadmium potassium bromide**
 - Solubility in water, 4: 241
- Cadmium potassium chloride**
 - Refractive index, 7: 28
 - Solubility in water, 4: 241
 - Thermal conductivity, 5: 232
- Cadmium potassium iodide**
 - Density, aqueous solution, 3: 91
 - Transition temperature, 4: 8
- Cadmium potassium nitrite**
 - Refractive index, 1: 156, 170
- Cadmium rubidium bromide**
 - Solubility in water, 4: 243
- Cadmium rubidium sulfate**
 - Density, 1: 160
 - Hydrate
 - Decomposition pressure, 7: 310
 - Heat of decomposition, 7: 310
 - Refractive index, 1: 160, 168; 7: 31
 - Solubility in water, 4: 243
- Cadmium selenate**
 - Reflectivity, selective, 5: 260
- Cadmium selenide**
 - Heat of formation, 5: 186
- Cadmium sodium sulfate**
 - Density, aqueous solution, 3: 86
 - Solubility in water, 4: 238
- Cadmium sulfate**
 - Ammines
 - Decomposition pressure, 7: 258
 - Heat of decomposition, 7: 258
 - Heat of formation, 5: 186
 - Boiling point elevation in aqueous solution, 3: 325
 - Concentration cells, 6: 326
 - Decomposition pressure of hydrates, 7: 257
 - Density, aqueous solution, 3: 66, 107
 - Diffusion in water, 5: 65
 - Electrical conductivity, aqueous solution, 6: 231, 235, 240
 - Freezing point lowering of aqueous solution, 4: 256
 - Heat of formation, 5: 186
 - Reflectivity, selective, 5: 260
 - Solubility in water, 4: 222
 - Pressure, effect of, 4: 265
 - Solution velocity in water, 5: 56
 - Specific heat, 5: 96
 - Aqueous solution, 5: 122
 - Surface tension, aqueous solution, 4: 464
 - Transference number, 6: 310
 - Vapor pressure, aqueous solution, 3: 366
 - Vapor pressure lowering in aqueous solution, 3: 294
 - Viscosity, aqueous solution, 5: 14
- Cadmium chloride*
- Ferrous sulfate
 - Freezing point-solubility in water, 4: 339, 389
- Hydrochloric acid
 - Equilibrium constant of reaction, 7: 258

Cadmium sulfate.—(Continued)

- Lithium sulfate
 - Freezing point-solubility, 4: 56
- Potassium sulfate
 - Freezing point-solubility, 4: 56, 78
- Silver bromate
 - Solubility in water, 7: 322
- Sodium sulfate
 - Density, aqueous solution, 3: 98
 - Freezing point-solubility, 4: 56
 - Freezing point-solubility in water, 4: 340
- Sulfuric acid
 - Density, aqueous solution, 3: 96
- Thallium monochloride
 - Solubility in water, 7: 320
- Cadmium sulfide**
 - Heat of formation, 5: 186
 - Photoelectric current, 6: 69
 - Refractive index, 7: 21
 - Specific heat, 5: 96
 - X-ray diffraction data, 1: 342
- Cadmium telluride**
 - Heat of formation, 5: 186
- Caedit (alloy)**, 2: 373
- Caffeine**
 - Absorption spectra, ultra-violet, 5: 343, 369
 - Diffusion in water, 5: 71
 - Electrical conductivity, aqueous solution, 6: 286
 - Heat of combustion, 5: 168
 - Heat of solution in water, 5: 150
 - Solubility in salt solutions, 4: 421
 - Solubility in water, 4: 251
- Acetone*
- Amyl acetate*
- Aniline*
- Antipyrine*
- Benzaldehyde*
- Benzene*
- Chloroform
 - Distribution coefficients in water, 3: 431
- Citric acid
 - Freezing point-solubility in water, 4: 417
- Ethyl ether
 - Distribution coefficients in water, 3: 431
- Isoamyl alcohol
 - Density, 3: 173
- Sodium benzoate
 - Freezing point-solubility in water, 4: 421
- Sulfuric acid
 - Freezing point-solubility in water, 4: 398
- Toluene
 - Density, 3: 187
- m-Xylene
 - Density, 3: 191
- Calamene**, optical rotatory power, 7: 461
- Calamine**
 - Density, 1: 119
 - Pyroelectric constant, 6: 210
 - Refractive index, 1: 119, 171
- Calaverite**
 - Density, 1: 125
 - See also Gold telluride.
- Calcioferite**
 - Density, 1: 145
 - Refractive index, 1: 145, 166
- Calcite**
 - Compressibility, 3: 50
 - Density, 1: 143
 - Dielectric constant, 6: 99
 - Electrical conductivity, aqueous solution 6: 258
 - Emission, spectral, 5: 257, 258, 259

* Data for system will be found under this compound in Index. Full explanation on page vii.

Calcite.—(Continued)

- Free energy
 - Reaction with carbonic acid, **7**: 297
 - Transformation to aragonite, **7**: 297
- Grating spaces of, **6**: 7
- Magnetic susceptibility, **6**: 364
- Photoluminescence, **5**: 387
- Refractive index, **1**: 143, 167; **7**: 24
- Residual rays, **5**: 261
- Spectral filter, use as, **5**: 273
- Thermal conductivity, **5**: 232
- Thermal expansion, **3**: 44
- Transmission of radiant energy, **5**: 270
- X-rays, reflection of, by, **6**: 50, 51
- X-rays, refraction of, by, **6**: 50
- See also Calcium carbonate.

Calcium

- Absorption spectra, solutions, **5**: 329
- Ammine
 - Decomposition pressure, **7**: 293
 - Heat of decomposition, **7**: 293
- Boiling point, **1**: 102; **3**: 205
- Cathodoluminescence, **5**: 387, 389
- Compressibility, **3**: 46, 48
- Critical potentials, **6**: 70
- Density, **1**: 104; **2**: 456
- Electrical conductivity, **1**: 104; **6**: 136, 137, 138
- Electrode potential, **6**: 332; **7**: 293
- Electrons, thermal emission of, **6**: 53
- Emission spectra, **5**: 285
- Entropy, **5**: 88; **7**: 293
- Entropy change on sublimation, **7**: 293
- Evaporation from hot filament, **5**: 53
- Free energy
 - Allotropic transformation, **7**: 293
 - Sublimation, **7**: 293
 - Vaporization, **7**: 293
- Hardness, **2**: 592
- Heat content, **5**: 88
- Heat of allotropic transformation, **7**: 293
- Heat of fusion, **7**: 293
- Heat of sublimation, **7**: 293
- Heat of vaporization, **1**: 102; **7**: 293
- Isotopes, **1**: 45
- Magnetic susceptibility, **6**: 354
- Melting point, **1**: 104
- Persistent lines, **5**: 323
- Photoelectric threshold, **6**: 68
- Quantum numbers, **5**: 408
- Sound, velocity of, in vapor, **6**: 462
- Specific heat, **1**: 104; **5**: 85, 88, 93; **7**: 293
- Spectral series, **5**: 396
- Tensile properties, **2**: 592
- Thermal expansion
 - Liquid, **2**: 463
 - Solid, **1**: 104; **2**: 460
- Thermionic work function, **6**: 53
- Thermochemistry, **5**: 196
- Thermodynamic potential, **5**: 88
- Thermoelectric properties, **6**: 214
- Vapor pressure, **3**: 205; **7**: 293
- X-ray absorption limit, **6**: 36, 45
- X-ray absorption spectra, **6**: 36
- X-ray crystal structure, **1**: 340
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption coefficient, **6**: 13
- X-rays, scattering, modification by, **6**: 17
- Zeeman effect, **5**: 420
- Aluminum*
- Ammonia*
- Antimony*
- Arsenic*
- Barium*-Lead
- Bismuth*
- Boron*
- Cadmium*
- Calcium chloride
 - Freezing point-solubility, **4**: 40
- Calcium fluoride
 - Freezing point-solubility, **4**: 40

Calcium.—(Continued)

- Calcium iodide
 - Freezing point-solubility, **4**: 40
- Copper
 - Equilibrium diagram, **2**: 429
- Lead
 - Equilibrium diagram, **2**: 414
- Magnesium
 - Density, **2**: 594
 - Equilibrium diagram, **2**: 429
- Mercury
 - Electrical conductivity, **6**: 190
 - Photoelectric threshold, **6**: 68
 - Surface tension, **2**: 591
 - Vapor pressure, partial, **3**: 284
- Silicon
 - Density, **2**: 594
- Silver
 - Equilibrium diagram, **2**: 421
- Thallium
 - Equilibrium diagram, **2**: 429
- Zinc
 - Equilibrium diagram, **2**: 429
- Calcium acetate
 - Density, aqueous solution, **3**: 74; **7**: 72
 - Electrical conductivity, aqueous solution, **6**: 241, 246, 254
 - Freezing point lowering of aqueous solution, **4**: 257
 - Heat of formation, **5**: 197
 - Refractive index, aqueous solution, **7**: 72
 - Solubility in water, **4**: 230
 - Specific heat, aqueous solution, **5**: 123
 - Surface tension, aqueous solution, **4**: 465
 - Viscosity, aqueous solution, **5**: 14
- Acetic acid*
- Acetic acid*-Potassium tartrate
- Ammonium sulfate*
- Hydrogen chloride-Potassium tartrate
 - Freezing point-solubility in water, **4**: 303
- Potassium sulfate-Sodium sulfate
 - Freezing point-solubility in water, **4**: 336
- Potassium sulfate-Sulfuric acid
 - Freezing point-solubility in water, **4**: 336
- Calcium aconitate
 - Crystallography, **1**: 322
 - Refractive index, **1**: 144, 170
- Calcium aluminate
 - Heat of formation, **5**: 197
 - Melting point, **1**: 145
 - Refractive index, **1**: 145, 172
- Gehlenite
 - Freezing point-solubility, **4**: 90, 92
- Calcium amide, heat of formation, **5**: 196
- Calcium arsenate
 - Heat of formation, **5**: 196
- Arsenous acid*
- Calcium benzoate
 - Freezing point lowering of aqueous solution, **4**: 257
 - Heat of solution in water, **5**: 150
 - Solubility in water, **4**: 231
- Calcium bicarbonate
 - Electrical conductivity, aqueous solution, **6**: 241, 246
 - Free energy of ionization, **7**: 297
- Calcium bromide
 - Ammines
 - Decomposition pressure, **7**: 295
 - Heat of decomposition, **7**: 295
 - Heat of formation, **5**: 196
 - Boiling point elevation in aqueous solution, **3**: 325
 - Compressibility, **3**: 50
 - Decomposition pressure of hydrate, **7**: 295
 - Density, **3**: 43
 - Aqueous solution, **3**: 73, 108

Calcium bromide.—(Continued)

- Drying agent, value as, **3**: 385
- Electrical conductivity, aqueous solution, **6**: 234, 239
- Freezing point lowering of aqueous solution, **4**: 257
- Heat of formation, **5**: 196
- Solubility in water, **4**: 229
- Transference number, **6**: 311
- Vapor pressure lowering in aqueous solution, **3**: 295
- Aluminum bromide*
- Arsenous oxide*
- Calcium chloride
 - Freezing point-solubility, **4**: 63
- Calcium hydroxide
 - Freezing point-solubility in water, **4**: 318, 387; **7**: 340
- Ethyl alcohol
 - Density, **3**: 140
 - Freezing point-solubility, **4**: 204
 - Verdet constant, **6**: 427
- Lead bromide
 - Freezing point-solubility in water, **4**: 317; **7**: 317
- Lead chloride
 - Freezing point-solubility in water, **4**: 275
- Lithium bromide
 - Freezing point-solubility, **4**: 64
- Mercuric bromide
 - Freezing point-solubility in water, **4**: 318
- Potassium bromide
 - Freezing point-solubility, **4**: 64
- Potassium sulfate
 - Freezing point-solubility in water, **4**: 316
- Sodium bromide
 - Freezing point-solubility, **4**: 64
- Calcium butyrate
 - Solubility in water, **4**: 230
- Calcium d-camphorate
 - d-Camphoric acid
 - Freezing point-solubility in water, **4**: 421
- Calcium carbide
 - Heat of formation, **5**: 197
 - Specific heat, **5**: 99
- Calcium carbonate
 - Albedo, **5**: 262
 - Carbon dioxide and water, reaction with, **7**: 296
 - Cathodoluminescence, **5**: 390
 - Compressibility, **3**: 50
 - Decomposition pressure, **7**: 297
 - Density, **3**: 44
 - Dielectric constant, **6**: 77
 - Electrical conductivity, aqueous solution, **6**: 258
 - X-rays, effect of, **6**: 6
 - Entropy, **5**: 91
 - Entropy change on allotropic transformation, **7**: 297
 - Free energy of allotropic transformation, **7**: 297
 - Free energy of decomposition, **7**: 297
 - Heat content, **5**: 91
 - Heat of allotropic transformation, **7**: 297
 - Heat of decomposition, **7**: 297
 - Heat of formation, **5**: 197
 - Magnetic susceptibility, **6**: 360
 - Oxalate ion, reaction with, **7**: 297
 - Reflectivity, selective, **5**: 260
 - Residual rays, **5**: 261
 - Specific heat, **5**: 87, 91, 99
 - Thermal conductivity, **5**: 216, 232, 233
 - Thermal expansion, **3**: 44
 - Thermodynamic potential, **5**: 91
 - Transition temperature, **4**: 7
 - X-ray crystal structure, **1**: 344

* Data for system will be found under this compound in Index. Full explanation on page vii.

Calcium carbonate.—(Continued)

See also Aragonite, Calcite, Iceland spar, Marble.

-Calcium chloride

Freezing point-solubility, **4**: 63

-Calcium sulfate-Carbon dioxide-Sodium chloride-Sodium sulfate

Density, aqueous solution, **3**: 103

-Carbon dioxide-Sodium chloride

Density, aqueous solution, **3**: 103

-Carbonic acid

Solubility in water, **7**: 296

-Carbonic acid-Sodium chloride

Freezing point-solubility in water, **4**: 300

-Potassium carbonate

Freezing point-solubility, **4**: 64

-Potassium carbonate-Sodium carbonate

Freezing point-solubility, **4**: 75, 82

-Potassium chloride

Density, aqueous solution, **3**: 98

Freezing point-solubility in water, **4**: 300

-Potassium oxalate-Trichloroacetic acid

Freezing point-solubility in water, **4**: 300

-Potassium sulfate

Density, aqueous solution, **3**: 98

Freezing point-solubility in water, **4**: 334

-Sodium carbonate

Freezing point-solubility, **4**: 64

-Sodium chloride

Density, aqueous solution, **3**: 98

Freezing point-solubility in water, **4**: 300

-Sodium chloride-Sodium sulfate

Density, aqueous solution, **3**: 100

Freezing point-solubility in water, **4**: 275

-Sodium sulfate

Density, aqueous solution, **3**: 98

Freezing point-solubility in water, **4**: 334

Calcium cesium sulfate

Transition temperature, **4**: 8

Calcium chlorate

Density, aqueous solution, **3**: 73

Saturated, **3**: 105

Electrical conductivity, aqueous solution, **6**: 245, 254

Refractive index, aqueous solution, **7**: 72

Solubility in water, **4**: 229

-Potassium sulfate

Freezing point-solubility in water, **4**: 313, 316

Calcium chloride

Absorption spectra, **5**: 329

Solutions, **5**: 327, 329

Acetic acid complexes, decomposition pressure, **7**: 295

Ammine

Decomposition pressure, **7**: 294

Heat of decomposition, **7**: 294

Heat of formation, **5**: 196

Boiling point elevation in aqueous solution, **3**: 325

Compressibility, **3**: 50

Aqueous solution, **3**: 439

Concentration cells, **6**: 326

Decomposition pressure of hydrates, **7**: 294

Density, **3**: 43

Aqueous solution, **2**: 327; **3**: 72, 108

Liquid, **3**: 23

Diffusion in water, **5**: 66

Drying agent, value as, **3**: 385

Electrical conductivity, **6**: 149

Aqueous solution, **6**: 231, 233, 239, 240

Freezing mixtures, use in, **1**: 63

Calcium chloride.—(Continued)

Freezing point lowering of aqueous solution, **4**: 257

Heat of formation, **5**: 196

Heat of fusion, **5**: 131

Magnetic susceptibility, **6**: 360

Phase equilibrium diagram of aqueous solution, **2**: 327

Refractive index, aqueous solution, **7**: 72

Solubility in water, **4**: 229, 247

Sound, velocity of, in aqueous solution, **6**: 464

Specific heat

Aqueous solution, **2**: 328; **5**: 123

Liquid, **5**: 106

Solid, **5**: 99

Surface tension, **4**: 442

Aqueous solution, **4**: 465

Thermal conductivity, **5**: 216

Aqueous solution, **5**: 229

Liquid hydrate, **5**: 228

Transference number, **6**: 310, 311

Vapor pressure, aqueous solution, **3**: 368

Vapor pressure lowering in aqueous solution, **3**: 295

Verdet constant, aqueous solution, **6**: 426

Viscosity, aqueous solution, **2**: 328; **5**: 14

X-rays, absorption coefficient, **6**: 13

-Acetic acid*

-Acetone*

-Ammonia*

-Ammonium sulfate*

-Arsenous oxide*

-Barium chloride*

-Barium chloride*-Strontium chloride

-Barium oxide*

-Barium sulfate*

-Bismuth chloride*

-Cadmium chloride*

-Calcium*

-Calcium bromide*

-Calcium carbonate*

-Calcium fluoride

Freezing point-solubility, **4**: 63

-Calcium fluoride-Calcium oxide

Freezing point-solubility, **4**: 75

-Calcium hydroxide

Solubility in water, **7**: 340

-Calcium hypochlorite

Density, aqueous solution, **3**: 98

-Calcium nitrate

Freezing point-solubility in water, **4**: 290

-Calcium oxide

Freezing point-solubility, **4**: 63

-Calcium phosphate

Freezing point-solubility, **4**: 63

-Calcium silicate

Freezing point-solubility, **4**: 63

-Calcium sulfate

Freezing point-solubility, **4**: 63

Freezing point-solubility in water, **4**: 286; **7**: 341

-Calcium tartrate

Solubility in water, **7**: 342

-Cerium fluoride

Freezing point-solubility, **4**: 62

-Chloroacetic acid-Potassium oxalate

Freezing point-solubility in water, **4**: 300

-Chloroacetic acid-Potassium tartrate

Freezing point-solubility in water, **4**: 303

-Cobaltous chloride

Boiling point elevation in aqueous solution, **3**: 348

-Cobaltous chloride-Ethyl alcohol

Boiling point elevation, **3**: 349

Calcium chloride.—(Continued)

-Cuprous chloride

Freezing point-solubility, **4**: 57

-Ethyl alcohol

Boiling point elevation, **3**: 337

Density, **3**: 140

Freezing point-solubility, **4**: 204

-Glycocoll

Freezing point-solubility in water, **4**: 404

-Hydrogen chloride

Density, aqueous solution, **3**: 95

Freezing point-solubility in water, **4**: 310

-Hydrogen chloride-Potassium oxalate

Freezing point-solubility in water, **4**: 303

-Lead bromide

Freezing point-solubility in water, **4**: 275

-Lead chloride

Freezing point-solubility, **4**: 51

Freezing point-solubility in water, **4**: 304; **7**: 315

-Lithium chloride

Freezing point-solubility, **4**: 63

-Magnesium chloride

Freezing point-solubility, **4**: 62

Freezing point-solubility in water, **4**: 309, 386

-Magnesium chloride-Potassium chloride-Sodium chloride

Freezing point-solubility in water, **4**: 311

-Magnesium chloride-Potassium chloride-Sodium sulfate

Freezing point-solubility in water, **4**: 279, 382

-Magnesium chloride-Sodium nitrate-Strontium chloride

Viscosity, aqueous solution, **5**: 19

-Magnesium sulfate

Freezing point-solubility in water, **4**: 278

-Manganese chloride

Freezing point-solubility, **4**: 60

-Mercuric chloride

Freezing point-solubility in water, **4**: 305

-Methyl alcohol

Boiling point elevation, **3**: 334

Density, **3**: 140

Freezing point-solubility, **4**: 204

-Nitric acid-Potassium oxalate

Freezing point-solubility in water, **4**: 290

-Oxalic acid

Freezing point-solubility in water, **4**: 303

-Phthalic acid

Density, aqueous solution, **3**: 102

Freezing point-solubility in water, **4**: 419

-Potassium carbonate

Freezing point-solubility in water, **4**: 300

-Potassium chloride

Electrical conductivity, **6**: 151

Freezing point-solubility, **4**: 64

Freezing point-solubility in water, **4**: 310

-Potassium chloride-Sodium chloride

Freezing point-solubility, **4**: 75, 81

-Potassium nitrate

Freezing point-solubility in water, **4**: 290

-Potassium sulfate

Freezing point-solubility in water, **4**: 287

Calcium chloride.—(Continued)

- Potassium sulfate-Sodium sulfate*
Freezing point-solubility in water, **4**: 287
- Potassium sulfate-Sulfuric acid*
Freezing point-solubility in water, **4**: 287
- Silver chloride*
Freezing point-solubility, **4**: 58; **7**: 266
- Sodium carbonate*
Freezing point-solubility in water, **4**: 300
- Sodium chloride*
Density, aqueous solution, **3**: 98
Electrical conductivity, **6**: 151
Freezing point-solubility, **4**: 63
Freezing point-solubility in water, **4**: 312
Viscosity, aqueous solution, **5**: 19
- Sodium nitrate*
Viscosity, aqueous solution, **5**: 19
- Sodium sulfate*
Freezing point-solubility in water, **4**: 286
- Stannous chloride*
Freezing point-solubility, **4**: 49
- Strontium chloride*
Freezing point-solubility, **4**: 63
- Strontium oxide*
Freezing point-solubility, **4**: 63
- Strontium sulfate*
Solubility in water, **7**: 343
- Sulfuric acid*
Freezing point-solubility in water, **4**: 286
- Thallium monochloride*
Freezing point-solubility, **4**: 53
Solubility in water, **7**: 320
- Yttrium fluoride*
Freezing point-solubility, **4**: 62
- Zinc chloride*
Freezing point-solubility, **4**: 54
- Calcium chromate**
Density, aqueous solution, **3**: 74
Electrical conductivity, aqueous solution, **6**: 246
Reflectivity, selective, **5**: 260
Solubility in water, **4**: 231, 247
Viscosity, aqueous solution, **5**: 14
- Calcium cinnamate**
Solubility in water, **4**: 231
- Calcium citrate**
Crystallography, **1**: 322
Refractive index, **1**: 144, 170
- Calcium crotonate**
Crystallography, **1**: 322
Refractive index, **1**: 144, 170
- Calcium cupric acetate**
Density, **1**: 144
Refractive index, **1**: 144, 166
Thermal conductivity, **5**: 232
- Calcium cyanamide**, electrical conductivity, aqueous solution, **6**: 246
- Calcium cyanide**, heat of formation, **5**: 197
- Calcium cyanoplatinite**
Luminescence, **5**: 389
- Calcium dithionate**
Density, **1**: 143
Freezing point lowering of aqueous solution, **4**: 257
Heat of formation, **5**: 196
Optical rotatory power, **7**: 353
Refractive index, **1**: 143, 166; **7**: 24
Solubility in water, **4**: 230
Thermal conductivity, **5**: 232
- Ethyl alcohol*
Freezing point-solubility in water, **4**: 407
- Calcium ethylate**
Heat of formation, **5**: 197

Calcium ferricyanide

- Electrical conductivity, aqueous solution, **6**: 246
- Osmotic pressure, **4**: 431
- Potassium sulfate*
Freezing point-solubility in water, **4**: 345
- Calcium ferrite**
Decomposition point, **4**: 84
Kerr constant, **6**: 435
Melting point, **1**: 145
Refractive index, **1**: 145, 168
- Calcium ferrocyanide**
Absorption spectra, solutions, **5**: 329
Density, aqueous solution, **3**: 74
Saturated, **3**: 105
Electrical conductivity, aqueous solution, **6**: 241, 246, 254
Freezing point lowering of aqueous solution, **4**: 257
Heat of formation, **5**: 197
Osmotic pressure, **4**: 431
Refractive index, **1**: 145, 171; **7**: 25
Vapor pressure lowering in aqueous solution, **3**: 295
- Potassium sulfate*
Freezing point-solubility in water, **4**: 345
- Sodium ferrocyanide*
Freezing point-solubility in water, **4**: 378
- Calcium fluoride**
Band spectra, **5**: 412
Compressibility, **3**: 50
Dielectric constant, **6**: 77, 99
Electrical conductivity, **6**: 154
Aqueous solution, **6**: 257
X-rays, effect of, **6**: 6
Emission, spectral, **5**: 257, 258, 259
Entropy, **5**: 91
Heat of formation, **5**: 196
Light, transmission of, **5**: 264
Luminescence, **5**: 389
Magnetic susceptibility, **6**: 360
Radiation, transmission of, **5**: 264
Refractive index, **7**: 13, 14
Residual rays, **5**: 261
Specific heat, **5**: 91, 99
Thermal conductivity, **5**: 216, 217, 231, 233
Thermal expansion, **3**: 43
Transmission of radiant energy, **5**: 270
Verdet constant, **6**: 426
X-radiation, scattered, distribution of, **6**: 20
X-ray diffraction data, **1**: 344
- Aluminum fluoride**
- Aluminum fluoride*-Sodium fluoride*
- Aluminum oxide*-Cryolite*
- Barium fluoride*-Magnesium fluoride*
- Calcium**
- Calcium chloride**
- Calcium chloride*-Calcium oxide*
- Calcium iodide*
Freezing point-solubility, **4**: 63
- Calcium phosphate*
Freezing point-solubility, **4**: 63
- Calcium silicate*
Freezing point-solubility, **4**: 63
- Cryolite*
Density, **3**: 135
- Magnesium fluoride*
Freezing point-solubility, **4**: 62
- Sodium fluoride*
Freezing point-solubility, **4**: 63
- Calcium formate**
Crystallography, **1**: 321
Density, **1**: 143
Aqueous solution, **3**: 74; **7**: 72
Electrical conductivity, aqueous solution, **6**: 246

Calcium formate.—(Continued)

- Heat of formation, **5**: 197
- Refractive index, **1**: 143, 169; **7**: 24
- Aqueous solution, **7**: 72
- Solubility in water, **4**: 230
- Specific heat, **5**: 99
- Surface tension, aqueous solution, **4**: 465
- Formic acid*
Freezing point-solubility, **4**: 204
- Calcium fumarate**
Crystallography, **1**: 321
Refractive index, **1**: 143, 171
- Calcium hydride**
Band spectra, **5**: 412
Decomposition pressure, **7**: 294
Free energy of decomposition, **7**: 294
Heat of decomposition, **7**: 294
Heat of formation, **5**: 196
Specific heat, **5**: 87, 99; **7**: 294
- Calcium hydrogen arsenate**
Heat of formation, **5**: 196
- Calcium hydrogen malate**
Crystallography, **1**: 322
Refractive index, **1**: 144, 169; **7**: 24
- Calcium hydrogen phosphate**
Heat of formation, **5**: 196
- Calcium hydrosulfide**
Density, aqueous solution, **3**: 73
- Calcium hydroxide**
Decomposition pressure, **7**: 294
Density, **1**: 143
Aqueous solution, **3**: 72
Diffusion in water, **5**: 66
Electrical conductivity, aqueous solution, **6**: 245
Free energy of ionization, **7**: 294
Heat of decomposition, **7**: 294
Heat of formation, **5**: 196
Magnetic susceptibility, **6**: 360
Refractive index, **1**: 143, 167
Solubility in water, **4**: 229
Specific heat, **5**: 87, 99
Sulfate ion, reaction with, **7**: 295
Transference number, **6**: 310
X-ray diffraction data, **1**: 344
- Ammonium chloride**
- Boric acid**
- Calcium bromide**
- Calcium chloride**
- Calcium iodide*
Freezing point-solubility in water, **4**: 320, 387; **7**: 340
- Calcium nitrate*
Density, aqueous solution, **3**: 98
Solubility in water, **7**: 340
- Calcium sulfate*
Freezing point-solubility in water, **4**: 353; **7**: 340, 341
- Cupric sulfate*
Freezing point-solubility in water, **4**: 341
- Glycerol*
Density, aqueous solution, **4**: 413
Freezing point-solubility in water, **4**: 413; **7**: 340
- Hydrogen chloride*
Freezing point-solubility in water, **4**: 311, 386
- Nitric acid*
Freezing point-solubility in water, **4**: 363
- Phenol*
Freezing point-solubility in water, **4**: 416; **7**: 340
- Potassium chloride*
Solubility in water, **7**: 340
- Potassium sulfate*
Freezing point-solubility in water, **4**: 353
- Sodium chloride*
Solubility in water, **7**: 340

* Data for system will be found under this compound in Index. Full explanation on page vii.

Calcium hydroxide.—(Continued)

-Sodium hydroxide

Solubility in water, 7: 340

-Sodium sulfate

Freezing point-solubility in water, 4: 353; 7: 295

-Sucrose

Freezing point-solubility in water, 4: 422

Calcium hypochlorite

Heat of formation, 5: 196

-Calcium chloride*

Calcium iodate

Density, 1: 143

Solubility in water, 4: 229

Calcium iodide

Ammines

Decomposition pressure, 7: 295

Heat of decomposition, 7: 295

Heat of formation, 5: 196

Density, aqueous solution, 3: 73, 108

Electrical conductivity, aqueous solution, 6: 235, 239

Freezing point lowering of aqueous solution, 4: 257

Heat of formation, 5: 196

Luminescence, 5: 389

Solubility in water, 4: 229

Transference number, 6: 311

Vapor pressure lowering in aqueous solution, 3: 295

-Calcium*

-Calcium fluoride*

-Calcium hydroxide*

-Iodine

Freezing point-solubility, 4: 31

-Mercuric iodide

Freezing point-solubility in water, 4: 319

-Potassium iodide

Freezing point-solubility in water, 4: 318

-Potassium sulfate-Sodium sulfate

Freezing point-solubility in water, 4: 318

Calcium isobutyrate

Density, aqueous solution, 7: 72

Heat of solution in water, 5: 149

Refractive index, aqueous solution, 7: 72

Solubility in water, 4: 230

Calcium isosuccinate

Solubility in water, 4: 230

Calcium isovalerate

Solubility in water, 4: 230

Calcium lactate

Density, aqueous solution, 7: 72

Refractive index, aqueous solution, 7: 72

Calcium magnesium carbonate

Specific heat, 5: 99

Thermal expansion, 3: 44

Calcium magnesium chloride

Heat of formation, 5: 197

Calcium magnesium orthosilicate

Decomposition temperature, 4: 84

Calcium magnesium oxide

Specific heat, 5: 99

Calcium malate

Crystallography, 1: 322

Refractive index, 1: 144, 170

Solubility in water, 4: 230

Calcium maleate

Crystallography, 1: 321

Refractive index, 1: 143, 170

Calcium malonate

Crystallography, 1: 321

Solubility in water, 4: 230

Calcium manganate

Absorption spectra, solutions, 5: 329

Electrical conductivity, aqueous solution, 6: 246

Calcium mercuric bromide

Heat of formation, 5: 197

Calcium mercuric cyanide

Heat of formation, 5: 197

Calcium mesotartrate

Crystallography, 1: 322

Refractive index, 1: 144, 170

Calcium metaaluminate

Melting point, 4: 84

Calcium metaborate

Melting point, 1: 145

Refractive index, 1: 145, 172

Calcium metasilicate

Melting point, 4: 84

Transformation temperature, 4: 84

See also Pseudowollastonite, Wollastonite.

-Barium metasilicate*

-Ferrous metasilicate

Freezing point-solubility, 4: 85

-Magnesium metasilicate

Density, 3: 134

-Manganese metasilicate

Freezing point-solubility, 4: 85

-Sodium silicate

Freezing point-solubility, 4: 85

-Strontium metasilicate

Freezing point-solubility, 4: 85, 88

-Zinc metasilicate

Freezing point-solubility, 4: 85

Calcium methylethylacetate

Solubility in water, 4: 230

Calcium molybdate

Refractive index, 7: 25

Specific heat, 5: 99

Calcium monometaphosphate

Specific heat, 5: 99

Calcium monophosphate

Heat of formation, 5: 196

Calcium nitrate

Absorption spectra, solutions, 5: 329

Boiling point elevation in aqueous solution, 3: 325

Crystallization velocity, 5: 61

Decomposition pressure of hydrate, 7: 296

Density, 1: 143

Aqueous solution, 3: 73, 108, 7: 72

Saturated, 3: 105

Diffusion in ethyl alcohol, 5: 73

Diffusion in water, 5: 66

Electrical conductivity, aqueous solution, 6: 231, 238, 240

Freezing point lowering of aqueous solution, 4: 257

Heat of formation, 5: 196

Heat of fusion, 5: 131

Melting point, 1: 143

Refractive index, 1: 143, 169

Aqueous solution, 7: 72

Solubility in water, 4: 230, 247

Specific heat, aqueous solution, 5: 123

Transference number, 6: 310

Vapor pressure, aqueous solution, 3: 368

Vapor pressure lowering in aqueous solution, 3: 295

Viscosity, aqueous solution, 5: 14

X-ray diffraction data, 1: 344

-Acetone*

-Acetone*-Ethyl alcohol

-Acetone*-Methyl alcohol

-Ammonia*

-Ammonium sulfate*

-Calcium chloride*

-Calcium hydroxide*

-Calcium sulfate

Density, aqueous solution, 3: 98

Freezing point-solubility in water, 4: 324; 7: 341

Calcium nitrate.—(Continued)

-Calcium thiosulfate

Freezing point-solubility in water, 4: 355

-Ethyl alcohol

Boiling point elevation, 3: 337

Density, 3: 140

Aqueous solution, 3: 102

Freezing point-solubility in water, 4: 407

Refractive index, aqueous solution, 7: 94

Viscosity, 5: 29

Aqueous solution, 5: 24

-Ethyl alcohol-Formamide

Density, 3: 143

Viscosity, 5: 30

-Magnesium nitrate-Sodium chloride

Viscosity, aqueous solution, 5: 19

-Magnesium sulfate

Freezing point-solubility in water, 4: 324

-Methyl acetate

Boiling point elevation, 3: 340

Density, 3: 140

-Methyl alcohol

Boiling point elevation, 3: 334

Density, 3: 140

-Potassium chloride

Freezing point-solubility in water, 4: 290

-Potassium nitrate

Freezing point-solubility, 4: 64

Freezing point-solubility in water, 4: 364, 392

-Potassium nitrate-Sodium nitrate

Freezing point-solubility, 4: 75, 81

-Potassium sulfate

Freezing point-solubility in water, 4: 324

-Potassium sulfate-Sulfuric acid

Freezing point-solubility in water, 4: 324

-Sodium nitrate

Freezing point-solubility, 4: 64

Freezing point-solubility in water, 4: 364

Viscosity, aqueous solution, 5: 19

-Sodium sulfate

Freezing point-solubility in water, 4: 324

-Sodium thiosulfate

Freezing point-solubility in water, 4: 355, 391

-Sulfuric acid

Freezing point-solubility in water, 4: 324

Calcium nitride

Decomposition pressure, 7: 297

Heat of formation, 5: 196

Calcium nitrite

Electrical conductivity, aqueous solution, 6: 246

Freezing point lowering of aqueous solution, 4: 257

Solubility in water, 4: 230

-Silver nitrite

Freezing point-solubility in water, 4: 356, 390

Calcium nitrotetrate

Crystallography, 1: 322

Density, 1: 144

Refractive index, 1: 144, 171

Calcium orthodisilicate

Decomposition temperature, 4: 84

Melting point, 1: 144

Refractive index, 1: 144, 174

Calcium orthosilicate

Heat of formation, 5: 197

Melting point, 4: 84

Refractive index, 1: 144, 171, 172, 174

* Data for system will be found under this compound in Index. Full explanation on page vii.

Calcium orthosilicate.—(Continued)

- Transformation points, 1: 144; 4: 84
- Akermanite**
 - Gehlenite*
 - Freezing point-solubility, 4: 90, 92
 - Lithium orthosilicate*
 - Density, 3: 135
 - Freezing point-solubility, 4: 85
 - Manganese orthosilicate*
 - Freezing point-solubility, 4: 85
 - Pentacalcium hexaluminate*
 - Freezing point-solubility, 4: 85, 88
- Calcium oxalate**
- Crystallography, 1: 321
 - Density, 1: 143
 - Electrical conductivity, aqueous solution, 6: 257
 - Heat of formation, 5: 197
 - Solubility in water, 6: 257
 - Acetic acid**
 - Chloroacetic acid-Potassium chloride*
 - Freezing point-solubility in water, 4: 300
 - Ethyl alcohol*
 - Freezing point-solubility in water, 4: 407
 - Hydrogen chloride-Potassium chloride*
 - Freezing point-solubility in water, 4: 303
- Calcium oxide**
- Albedo, 5: 263
 - Band spectra, 5: 412
 - Cathodoluminescence, 5: 390
 - Decomposition pressure, 7: 294
 - Density, 1: 143
 - Drying agent, value as, 3: 385
 - Electrical conductivity, 6: 154
 - Electrons, thermal emission of, 6: 54
 - Entropy, 5: 91
 - Freezing point lowering of aqueous solution, 4: 257
 - Heat content, 5: 91
 - Heat of formation, 5: 196
 - Heat of transition, 5: 196
 - Luminescence, 5: 389
 - Magnetic susceptibility, 6: 360
 - Melting point, 1: 143
 - Refractive index, 1: 143, 165
 - Specific heat, 5: 91, 99; 7: 293
 - Thermionic work function, 6: 54, 56
 - Thermodynamic potential, 5: 91
 - Transition temperature, 4: 84
 - Vapor pressure, 7: 294
 - X-ray diffraction data, 1: 344
 - Aluminum oxide**
 - Aluminum oxide*-Ferric oxide*
 - Aluminum oxide*-Magnesium oxide*
 - Aluminum oxide*-Silica*
 - Arsenic acid**
 - Barium chloride*-Barium oxide*
 - Boric acid**
 - Calcium chloride**
 - Calcium chloride*-Calcium fluoride*
 - Carbon dioxide*
 - Vapor pressure, 3: 357
 - Aqueous solution, 3: 377
 - Ferric oxide*
 - Density, 3: 134
 - Freezing point-solubility, 4: 85, 87
 - Ferrous oxide-Silica*
 - Freezing point-solubility, 4: 92
 - Lithium oxide-Silica*
 - Freezing point-solubility, 4: 92
 - Magnesium oxide*
 - Eutectic point, 4: 85
 - Magnesium oxide-Silica*
 - Freezing point-solubility, 4: 94-96
 - Phosphoric acid*
 - Freezing point-solubility in water, 4: 370, 392

Calcium oxide.—(Continued)

- Silica*
 - Freezing point-solubility, 4: 85, 86
 - Silica-Sodium oxide*
 - Freezing point-solubility, 4: 96, 97
 - Silica-Titanium dioxide*
 - Freezing point-solubility, 4: 92
 - Strontium oxide*
 - X-ray pattern, 4: 85
- Calcium oxyorthosilicate**
- Decomposition temperature, 4: 84
- Calcium perchlorate**
- Butyl alcohol**
 - Ethyl acetate*
 - Density, 3: 140
 - Ethyl alcohol*
 - Density, 3: 140
 - Ethyl ether*
 - Density, 3: 140
 - Isobutyl alcohol*
 - Density, 3: 140
 - Methyl alcohol*
 - Density, 3: 140
 - Propyl alcohol*
 - Density, 3: 140
- Calcium peroxide**
- Decomposition pressure, 7: 294
 - Free energy of decomposition, 7: 294
 - Heat of formation, 5: 196
- Calcium phosphate**
- Density, aqueous solution, 3: 74
 - Heat of formation, 5: 196
 - Reflectivity, selective, 5: 260
 - Thermal conductivity, 5: 216
 - Calcium chloride**
 - Calcium fluoride**
 - Potassium sulfate-Sulfuric acid*
 - Freezing point-solubility in water, 4: 333
 - Sodium tetraborate*
 - Freezing point-solubility, 4: 64
 - Sulfuric acid*
 - Freezing point-solubility in water, 4: 333
- Calcium platinocyanide**
- Refractive index, 1: 144, 174; 7: 25
- Calcium potassium chloride**
- Heat of formation, 5: 206
- Calcium potassium sulfate**
- Refractive index, 7: 28
 - Transition temperature, 4: 8
- Calcium propionate**
- Density, aqueous solution, 3: 74
 - Electrical conductivity, aqueous solution, 6: 246, 254
 - Solubility in water, 4: 230
- Calcium rubidium sulfate**
- Transition temperature, 4: 8
- Calcium selenate**
- Solubility in water, 4: 230
 - Magnesium sulfate*
 - Solubility in water, 7: 342
- Calcium selenide**
- Heat of formation, 5: 196
 - X-ray diffraction data, 1: 344
- Calcium silicate**
- Heat of formation, 5: 197
 - Refractive index, 7: 24
 - Akermanite**
 - Anorthite**
 - Calcium chloride**
 - Calcium fluoride**
 - Calcium sulfide*
 - Freezing point-solubility, 4: 64
 - Calcium titanate*
 - Freezing point-solubility, 4: 64
 - Diopside*
 - Freezing point-solubility, 4: 85, 89
 - Gehlenite*
 - Freezing point-solubility, 4: 85, 89
- Calcium silicide, heat of formation, 5: 197**

Calcium sodium sulfate

- Heat of formation, 5: 203
- Calcium succinate**
- Crystallography, 1: 322
 - Refractive index, 1: 144, 170
 - Solubility in water, 4: 230
 - Barium succinate**
 - Magnesium succinate*
 - Solubility in water, 7: 342
 - Sodium succinate*
 - Solubility in water, 7: 342
- Calcium sulfate**
- Compressibility, 3: 50
 - Decomposition pressure of hydrates, 7: 295, 296
 - Density, 1: 143
 - Aqueous solution, 3: 73, 108
 - Dielectric constant, 6: 77, 100
 - Electrical conductivity, aqueous solution, 6: 231, 236
 - Heat of formation, 5: 196
 - Magnetic susceptibility, 6: 360
 - Reflectivity, selective, 5: 260
 - Refractive index, 1: 143, 170; 7: 24
 - Solubility in water, 4: 229
 - Solution velocity in water, 5: 56
 - Specific heat, 5: 99
 - Surface tension, aqueous solution, 4: 465
 - Thermal conductivity, 5: 216, 232
 - Thermal expansion, 3: 44
 - Transference number, 6: 310
 - Transition temperature, 1: 143; 4: 7
 - X-ray diffraction data, 1: 344
 - See also Gypsum.
 - Acetic acid*-Potassium acetate*
 - Ammonium acetate**
 - Ammonium chloride**
 - Ammonium nitrate**
 - Ammonium sulfate**
 - Calcium carbonate*-Carbon dioxide-Sodium chloride-Sodium sulfate*
 - Calcium chloride**
 - Calcium hydroxide**
 - Calcium nitrate**
 - Calcium silicate**
 - Cesium sulfate*
 - Freezing point-solubility in water, 4: 353
 - Cupric sulfate*
 - Density, aqueous solution, 3: 98
 - Freezing point-solubility in water, 4: 341; 7: 341
 - Hydrogen chloride*
 - Freezing point-solubility in water, 4: 286; 7: 340
 - Lithium sulfate*
 - Freezing point-solubility, 4: 64
 - Magnesium chloride*
 - Freezing point-solubility in water, 4: 278; 7: 341
 - Magnesium chloride-Potassium chloride-Sodium chloride*
 - Freezing point-solubility in water, 4: 279
 - Magnesium nitrate*
 - Density, aqueous solution, 3: 98
 - Freezing point-solubility in water, 4: 324; 7: 341
 - Magnesium sulfate*
 - Density, aqueous solution, 3: 98
 - Freezing point-solubility in water, 4: 349; 7: 341
 - Magnesium sulfate-Potassium sulfate*
 - Freezing point-solubility in water, 4: 349, 390, 391
 - Potassium bromide*
 - Freezing point-solubility in water, 4: 316
 - Potassium carbonate*
 - Freezing point-solubility in water, 4: 334

* Data for system will be found under this compound in Index. Full explanation on page vii.

Calcium sulfate.—(Continued)

- Potassium chlorate*
Freezing point-solubility in water, 4: 313
- Potassium chloride*
Freezing point-solubility in water, 4: 287
- Potassium ferricyanide*
Freezing point-solubility in water, 4: 345
- Potassium ferrocyanide*
Freezing point-solubility in water, 4: 345
- Potassium hydroxide*
Freezing point-solubility in water, 4: 353
- Potassium iodide*
Freezing point-solubility in water, 4: 318
- Potassium nitrate*
Density, aqueous solution, 3: 98
Freezing point-solubility in water, 4: 324; 7: 342
- Potassium perchlorate*
Freezing point-solubility in water, 4: 316
- Potassium sulfate*
Density, aqueous solution, 3: 98
Freezing point-solubility, 4: 64
Freezing point-solubility in water, 4: 353, 390; 7: 342
- Potassium sulfate-Silver sulfate*
Freezing point-solubility in water, 4: 341
- Potassium sulfate-Sodium sulfate*
Freezing point-solubility in water, 4: 324
- Potassium sulfate-Sulfuric acid*
Freezing point-solubility in water, 4: 353
- Rubidium sulfate*
Freezing point-solubility, 4: 64, 79
Freezing point-solubility in water, 4: 353, 390
- Silver sulfate*
Density, aqueous solution, 3: 98
- Sodium carbonate*
Freezing point-solubility in water, 4: 334
- Sodium chloride*
Freezing point-solubility in water, 4: 286; 7: 341
Vapor pressure, aqueous solution, 3: 380
- Sodium chloride-Sodium sulfate*
Density, aqueous solution, 3: 100
Freezing point-solubility in water, 4: 287
- Sodium hydroxide*
Freezing point-solubility in water, 4: 353
- Sodium iodide*
Freezing point-solubility in water, 4: 318
- Sodium nitrate*
Density, aqueous solution, 3: 98
Freezing point-solubility in water, 4: 324; 7: 342
- Sodium sulfate*
Density, aqueous solution, 3: 98
Freezing point-solubility, 4: 64
Freezing point-solubility in water, 4: 353; 7: 342
- Sucrose*
Freezing point-solubility in water, 4: 422
- Sulfuric acid*
Density, aqueous solution, 3: 96
Freezing point-solubility, 4: 43
Freezing point-solubility in water, 4: 352

Calcium sulfide

- Heat of formation, 5: 196
- Luminescence, 5: 389
- Phototropy, 7: 167
- Solubility in water, 4: 229
- X-ray diffraction data, 1: 344
- Calcium silicate**
- Hydrogen sulfide*
Freezing point-solubility in water, 4: 322, 398

Calcium sulfite

- Free energy of ionization, 7: 295
- Heat of formation, 5: 196
- Specific heat, 5: 99
- Sulfur*
Equilibrium relations in water, 7: 295

Calcium tartrate

- Heat of formation, 5: 197
- Refractive index, 1: 144, 170
- Solubility in water, 4: 230
- Acetic acid**
- Calcium chloride**
- Potassium acetate*
Freezing point-solubility in water, 4: 374
- Potassium tartrate*
Solubility in water, 7: 342
- Tartaric acid*
Solubility in water, 7: 342

Calcium tetraborate

- Heat of formation, 5: 196
- Calcium tetrasulfoniodide**
Decomposition pressure, 7: 295
Heat of decomposition, 7: 295

Calcium thiocyanate

- Density, aqueous solution, 3: 74; 7: 72
- Refractive index, aqueous solution, 7: 72
- Sulfur dioxide complex
Decomposition pressure, 7: 297
Heat of decomposition, 7: 297

Calcium thiosulfate

- Carbonate ion, reaction with, 7: 296
- Freezing point lowering of aqueous solution, 4: 257
- Heat of formation, 5: 196
- Solubility in water, 4: 229
- Specific heat, aqueous solution, 5: 123
- Sulfate ion, reaction with, 7: 296
- Vapor pressure lowering in aqueous solution, 3: 295
- Calcium nitrate**
- Sodium nitrate*
Freezing point-solubility in water, 4: 355
- Sodium thiosulfate*
Freezing point-solubility in water, 4: 355

Calcium titanate

- Calcium silicate**
- Calcium titanium sulfate**
Refractive index, 1: 144, 165

Calcium trimethylacetate

- Solubility in water, 4: 230

Calcium tungstate

- Refractive index, 7: 25
- Specific heat, 5: 99
- Thermal conductivity, 5: 232

Calcium valerate

- Solubility in water, 4: 230

Calendar, Gregorian, 1: 391

- Calido (Elalco), 2: 373; cf. 467**
Electrical conductivity, 6: 194

Calite, 2: 373; cf. 512**Calomel. See Mercurous chloride.****Calorie, 1: 18, 34; 5: 169****Calorite (alloy), 2: 373****Calorox**

- Density, 2: 312
- Thermal conductivity, 2: 312

Cambric, varnished

- Density, 2: 314
- Dielectric constant, 2: 310
- Dielectric strength, 2: 310
- Tensile strength, 2: 311
- Thermal conductivity, 2: 311, 314

Camel hair, 2: 235**Camelia metal, 2: 373; cf. 561****Camphene**

- Absorption spectra, 5: 346
- Azeotropic mixtures, 3: 320-322
- Dielectric constant, 6: 95
- Heat of combustion, 5: 163
- Optical rotatory power, 7: 411, 433
- Specific heat, 5: 104
- Verdet constant, 6: 430

-Benzene***-Borneol*****-Camphor**

- Freezing point-solubility, 4: 159

-Dipentene

- Freezing point-solubility, 4: 159

-Methyl isothiocyanate

- Freezing point-solubility, 4: 107

-Naphthalene

- Freezing point-solubility, 4: 180

-Phenanthrene

- Freezing point-solubility, 4: 159

-Pinene (α -, β -)

- Freezing point-solubility, 4: 159

-Pinene hydrochloride

- Freezing point-solubility, 4: 159

-Turpentine

- Freezing point-solubility, 4: 159

Campholenic acid

- Electrical conductivity, aqueous solution, 6: 296
- Heat of solution in water, 5: 150
- Optical rotatory power, 7: 415
- Surface tension, 4: 460

Campholic acid

- Electrical conductivity, aqueous solution, 6: 296
- Heat of combustion, 5: 166
- Optical rotatory power, 7: 443

Campholytic acid

- Electrical conductivity, aqueous solution, 6: 292
- Heat of combustion, 5: 165
- Optical rotatory power, 7: 415

Camphononic acid

- Optical rotatory power, 7: 433

Camphor

- Absorption spectra, 5: 346
- Allotropic forms, 4: 16
- Azeotropic mixtures, 3: 323
- Birefringence, electric, 7: 111
- Boiling point, 3: 226, 347
- Cryoscopic constant, 4: 184
- Diffusion in ethyl alcohol, 5: 74
- Diffusion in free air, 1: 358
- Heat of combustion, 5: 167
- Magnetic susceptibility, 6: 363
- Melting point under pressure, 4: 16, 18
- Optical rotatory power, 7: 354, 435
- Piezoelectric constant, 6: 210
- Refractive index, 7: 30
- Surface tension, aqueous solution, 4: 470
- Transition temperature, 4: 8
- Vapor pressure
Liquid, 3: 226
Solid, 3: 208
- Verdet constant, dispersion of, 6: 433
- Volume change on melting, 4: 16
- Acetamide**
- Acetic acid**
- Acetone**
- Anthracene**
- Benzene**
- Benzene**-Ethyl acetate
- Benzil**-Chloroform

* Data for system will be found under this compound in Index. Full explanation on page vii.

Camphor.—(Continued)

- Benzoic acid*
- Bornol*
- d-Bromocamphor*
- Butyric acid*
- Camphene*
- Caproic acid
 - Density, **3**: 185
- Carbon disulfide
 - Boiling point elevation, **3**: 330
 - Density, **3**: 146
- Carbon disulfide-Ethyl ether
 - Vapor pressure, **3**: 375
- Carbon tetrachloride
 - Boiling point elevation, **3**: 330
 - Density, **3**: 144
- Catechol
 - Freezing point-solubility, **4**: 138
- Chloroacetic acid
 - Freezing point-solubility, **4**: 106
- Chlorobenzene
 - Density, **3**: 175; **7**: 84
 - Refractive index, **7**: 84
- Chloroform
 - Boiling point elevation, **3**: 332
 - Density, **3**: 148
 - Freezing point-solubility, **4**: 99
- Chloronitrobenzene (o-, m-)
 - Freezing point-solubility, **4**: 123
- Cinnamic acid
 - Freezing point-solubility, **4**: 154
- p-Dibromobenzene
 - Freezing point-solubility, **4**: 123
- 1, 1-Dichloroethane
 - Boiling point elevation, **3**: 335
- Dimethylaniline
 - Density, **3**: 192
- m-Dinitrobenzene
 - Freezing point-solubility, **4**: 125
- 2, 4-Dinitrophenol
 - Freezing point-solubility, **4**: 126
- 2, 4-Dinitroresorcinol
 - Freezing point-solubility, **4**: 127
- Ethyl acetate
 - Boiling point elevation, **3**: 341
 - Density, **3**: 167; **7**: 83
 - Refractive index, **7**: 83
- Ethyl alcohol
 - Boiling point elevation, **3**: 337
 - Density, **3**: 161; **7**: 81
 - Aqueous solution, **3**: 128
 - Freezing point-solubility, **4**: 110
 - Refractive index, **7**: 81
 - Viscosity, **5**: 38
- Ethyl bromide
 - Boiling point elevation, **3**: 336
 - Density, **3**: 158
- Ethyl chloroacetate
 - Density, **3**: 165
- Ethyl ether
 - Boiling point elevation, **3**: 341
 - Density, **3**: 168
- Ethyl formate
 - Boiling point elevation, **3**: 339
- Ethyl iodide
 - Boiling point elevation, **3**: 336
- Ethylene dibromide
 - Boiling point elevation, **3**: 335
- Ethylene dichloride
 - Boiling point elevation, **3**: 335
- Formic acid
 - Density, **3**: 149; **7**: 79
 - Refractive index, **7**: 79
- Hexane
 - Density, **3**: 186
- Hydroquinone
 - Freezing point-solubility, **4**: 140
- Isobutyl alcohol
 - Density, **3**: 168; **7**: 83
 - Refractive index, **7**: 83

Camphor.—(Continued)

- Menthol
 - Freezing point-solubility, **4**: 159
- Methyl acetate
 - Boiling point elevation, **3**: 339
- Methyl alcohol
 - Boiling point elevation, **3**: 334
 - Density, **3**: 152; **7**: 80
 - Aqueous solution, **3**: 125
 - Refractive index, **7**: 80
- Methyl iodide
 - Boiling point elevation, **3**: 333
- Methyl isothiocyanate
 - Freezing point-solubility, **4**: 107
- Methylal
 - Boiling point elevation, **3**: 340
- Naphthalene
 - Freezing point-solubility, **4**: 180
- β-Naphthylamine
 - Freezing point-solubility, **4**: 180
- Nitroaniline (o-, m-, p-)
 - Freezing point-solubility, **4**: 135
- Nitrocatechol
 - Freezing point-solubility, **4**: 132
- Nitrogen tetroxide
 - Freezing point-solubility, **4**: 189
- Nitrohydroquinol
 - Freezing point-solubility, **4**: 132
- α-Nitronaphthalene
 - Freezing point-solubility, **4**: 180
- Nitrophenol (o-, m-, p-)
 - Freezing point-solubility, **4**: 129–131
- Nitroresorcinol
 - Freezing point-solubility, **4**: 132
- Phenol
 - Freezing point-solubility, **4**: 137
- Phenyl salicylate
 - Freezing point-solubility, **4**: 159
- Phosphorus trichloride
 - Density, **3**: 136
- Phthalic anhydride
 - Freezing point-solubility, **4**: 152
- Picric acid
 - Freezing point-solubility, **4**: 120
- d-Pinene
 - Density, **3**: 194
- Pinene hydrochloride
 - Freezing point-solubility, **4**: 159
- Propionic acid
 - Density, **3**: 164; **7**: 82
 - Refractive index, **7**: 82
- Propyl alcohol
 - Boiling point elevation, **3**: 340
 - Density, **3**: 164; **7**: 83
 - Refractive index, **7**: 83
- Pyrogallol
 - Freezing point-solubility, **4**: 141
- Resorcinol
 - Freezing point-solubility, **4**: 139
- Salicylic acid
 - Freezing point-solubility, **4**: 149
- Styphnic acid
 - Freezing point-solubility, **4**: 122
- Sulfur dioxide
 - Density, **3**: 135
 - Freezing point-solubility, **4**: 187
- Sulfur monochloride
 - Density, **3**: 136
- Thiocarbonyl
 - Freezing point-solubility, **4**: 159
- Thionyl chloride
 - Boiling point elevation, **3**: 329
- Toluene
 - Boiling point elevation, **3**: 346
- p-Toluidine
 - Freezing point-solubility, **4**: 152
- 1, 3, 5-Trinitrobenzene
 - Freezing point-solubility, **4**: 119
- 2, 4, 6-Trinitrotoluene
 - Freezing point-solubility, **4**: 146

Camphor.—(Continued)

- Valeric acid
 - Density, **3**: 172
- Camphor monochloride**
 - Transition temperature, **4**: 8
- Camphoramidic acid**
 - Electrical conductivity, aqueous solution, **6**: 296
 - Optical rotatory power, **7**: 447
- Camphoramide**
 - Optical rotatory power, **7**: 447
- Camphorcarboxylic acid**
 - Absorption spectra, **5**: 347
 - Decomposition, kinetics of, **7**: 123
 - Electrical conductivity, aqueous solution, **6**: 298
 - Optical rotatory power, **7**: 445
- Benzene*
- Ethyl ether
 - Boiling point elevation, **3**: 341
- Methyl alcohol
 - Boiling point elevation, **3**: 334
- d-Camphoric acid**
 - Absorption spectra, **5**: 347
 - Density, aqueous solution, **3**: 115
 - Electrical conductivity, aqueous solution, **6**: 296
 - Heat of combustion, **5**: 166
 - Heat of solution in water, **5**: 150
 - Magnetic susceptibility, **6**: 363
 - Optical rotatory power, **7**: 446
 - Surface tension, aqueous solution, **4**: 470
- Barium d-camphorate*
- Benzene*
- Calcium d-camphorate*
- l-Camphoric acid
 - Freezing point-solubility, **4**: 159
- Carbon disulfide
 - Density, **3**: 146
- Chloroform
 - Density, **3**: 148
 - Distribution coefficients in water, **3**: 432
- Cumene
 - Density, **3**: 193
- Ethyl alcohol
 - Density, **3**: 161
 - Aqueous solution, **3**: 128; **4**: 405
 - Freezing point-solubility in water, **4**: 405
- Ethyl ether
 - Density, **3**: 168
 - Distribution coefficients in water, **3**: 432
- Isoamyl alcohol
 - Density, **3**: 173
- Lithium d-camphorate
 - Freezing point-solubility in water, **4**: 422
- Magnesium d-camphorate
 - Freezing point-solubility in water, **4**: 421
- Nitrobenzene
 - Density, **3**: 177
- Potassium d-camphorate
 - Freezing point-solubility in water, **4**: 422
- Sodium d-camphorate
 - Freezing point-solubility in water, **4**: 422
- Strontium d-camphorate
 - Freezing point-solubility in water, **4**: 421
- Toluene
 - Density, **3**: 188
- Turpentine
 - Density, **3**: 194
- m-Xylene
 - Density, **3**: 191
 - Distribution coefficients in water, **3**: 432

* Data for system will be found under this compound in Index. Full explanation on page vii.

Camphoric anhydride

- Absorption spectra, **5**: 346
- Crystallography, **1**: 330
- Heat of combustion, **5**: 166
- Magnetic susceptibility, **6**: 363
- Optical rotatory power, **7**: 446

Camphorimide

- Absorption spectra, **5**: 347
- Optical rotatory power, **7**: 447

d-Camphoroxime

- Absorption spectra, **5**: 347
- l*-Amyl bromide*
- l*-Camphoroxime
- Freezing point-solubility, **4**: 160
- Turpentine
- Density, **3**: 194

Camphorpinacone

- Dielectric constant, **6**: 97

Camphorquinone dioximes

- Optical rotatory power, **7**: 441

Camphorquinone phenylhydrazone

- Absorption spectra, **5**: 352
- Optical rotatory power, **7**: 441
- Chloroform
- Viscosity, **5**: 33

Camphorylcarbamide

- Optical rotatory power, **7**: 451

Camphorylcarbimide

- Optical rotatory power, **7**: 451

Camphoryloxime

- Optical rotatory power, **7**: 449
- Verdet constant, **6**: 430

Camphorylsemicarbazide

- Optical rotatory power, **7**: 452

Camphylamine

- Optical rotatory power, **7**: 418
- Refractive index, **7**: 53
- Verdet constant, **6**: 430
- Xylene
- Distribution coefficients in water, **3**: 432

Camsellite, refractive index, **1**: 142, 174**Canada**, weights and measures, **1**: 4**Canada balsam**

- Thermal conductivity, **5**: 217, 228

Cancrinite, refractive index, **7**: 27**Candle**, definition, **1**: 34**Candlepower**

- Definition, **1**: 35
- Mean spherical, **1**: 39
- Standard, **5**: 434

Canfieldite, density, **1**: 124**Can-metall**, **2**: 373; *cf.* 556**Cannizzaro reaction**, kinetics of, **7**: 146**Cantala fiber**, **2**: 236**Canvas**, varnished

- Dielectric strength, **2**: 310
- Tensile strength, **2**: 311

Cap gilding (alloy), **2**: 373; *cf.* 469, 555**Capacity**, secondary units, **1**: 2**Capillarity**, **4**: 432

See also Surface tension.

Capillary constant

- Conversion factors, **1**: 25
- Definition, **1**: 35
- Formula, **4**: 434

Capillary rise, formula, **4**: 434**Capric acid**

- Compressibility, **3**: 39
- Cryoscopic constant, **4**: 184
- Density, **3**: 45
- Esterification constant, **7**: 138
- Heat of combustion, **5**: 166
- Heat of fusion, **5**: 134
- Specific heat, **5**: 104
- Vapor pressure, **3**: 226
- Viscosity, **7**: 221
- Acetic acid*-Butyric acid

Caproamide

- Ethyl alcohol
- Density, **3**: 160

Caproic acid

- Absorption spectra, **5**: 332
- Birefringence, electric, **7**: 111
- Dielectric constant, **6**: 91
- Diffusion of vapor into air, **5**: 62
- Esterification constant, **7**: 138
- Electrical conductivity, aqueous solution, **6**: 276
- Heat of combustion, **5**: 165
- Refractive index, **7**: 40
- Specific heat, **5**: 110
- Surface tension, aqueous solution, **4**: 469
- Vapor pressure, **3**: 222
- Viscosity, **7**: 218

-Camphor***-Chloroform**

- Distribution coefficients in water, **3**: 428

-Xylene

- Distribution coefficients in water, **3**: 428

Capronitrile

- Critical point data, **3**: 249
- Electrical conductivity, **6**: 144
- Heat of vaporization, **5**: 137
- Refractive index, **7**: 39
- Specific heat, **5**: 110

-Nitrobenzene

- Dielectric constant, **6**: 103

-Oleates

- Dielectric constant, **6**: 104

Caproylphenylactylene

- Magnetic susceptibility, **6**: 363
- Verdet constant, **6**: 431

Capryl alcohol**-Benzene*****Caprylic acid**

- Birefringence, electric, **7**: 111
- Dielectric constant, **6**: 94
- Esterification constant, **7**: 138
- Electrical conductivity, **6**: 144
- Aqueous solution, **6**: 288
- Heat of fusion, **5**: 134
- Heat of solution in water, **5**: 150
- Interfacial tension, **4**: 438
- Refractive index, **7**: 45
- Specific heat, **5**: 104
- Surface tension, **4**: 437, 458
- Vapor pressure, **3**: 225
- Verdet constant, **6**: 430
- Viscosity, **7**: 220

Capsule metal, **2**: 373; *cf.* 467, 557**Car journal bearings**, **2**: 561**Caracolite**

- Density, **1**: 152
- Refractive index, **1**: 152, 173

Carbanilide**-Pyridine**

- Density, **3**: 172

Carbazole

- Absorption spectra, ultra-violet, **5**: 375
- Cryoscopic constant, **4**: 184
- Heat of combustion, **5**: 168
- Heat of fusion, **5**: 134
- Vapor pressure, **3**: 226
- Acetic acid*
- Acetone*
- Acridine*
- Aniline*
- Anthracene*
- Anthracene*-Chrysene
- Anthracene*-Phenanthrene
- Benzene*
- Carbon disulfide
- Freezing point-solubility, **4**: 172
- Carbon tetrachloride
- Freezing point-solubility, **4**: 172
- Catechol
- Freezing point-solubility, **4**: 178
- Chlorobenzene
- Freezing point-solubility, **4**: 128

Carbazole—(Continued)**-Chrysene**

- Freezing point-solubility, **4**: 180

-Dinitrobenzene (*o*-, *m*-, *p*-)

- Freezing point-solubility, **4**: 124

-2, 4-Dinitrophenol

- Freezing point-solubility, **4**: 126

-2, 4-Dinitrotoluene

- Freezing point-solubility, **4**: 147

-Ethyl alcohol

- Freezing point-solubility, **4**: 110

-Fenchone

- Boiling point elevation, **3**: 347

-Hydroquinol

- Freezing point-solubility, **4**: 140

-Naphthol (α -, β -)

- Freezing point-solubility, **4**: 180

-Nitrobenzene

- Boiling point elevation, **3**: 343

- Freezing point-solubility, **4**: 177

-Nitrophenol (*o*-, *m*-, *p*-)

- Freezing point-solubility, **4**: 177

-Phenanthrene

- Freezing point-solubility, **4**: 160

-Picric acid

- Freezing point-solubility, **4**: 121

-Pyridine

- Freezing point-solubility, **4**: 117

-Pyrogallol

- Freezing point-solubility, **4**: 178

-Resorcinol

- Freezing point-solubility, **4**: 178

-Retene

- Freezing point-solubility, **4**: 160

-Tetrachloroethane

- Freezing point-solubility, **4**: 105

-Toluene

- Freezing point-solubility, **4**: 150

-1, 3, 5-Trinitrobenzene

- Freezing point-solubility, **4**: 119

-2, 4, 6-Trinitrotoluene

- Freezing point-solubility, **4**: 146

Carbohydrates

- Hydrolysis by enzymes, **7**: 154
- Optical rotatory power, **7**: 386–401
- Relative sweetening power, **1**: 357
- See also* Names of individual sugars, as Arabinose, Glucose, etc.

Carbolon. *See* Carborundum.**Carbon**

- Band spectra, **5**: 412
- Boiling point, **1**: 102; **3**: 205
- Brightness, **5**: 246
- Brightness temperature, **5**: 245
- Color temperature, **5**: 246
- Commercial, **2**: 303
- Compressibility, **3**: 46
- Compton effect, **6**: 18
- Contact potential, **6**: 57
- Critical potentials, **6**: 70
- Density, **1**: 103; **2**: 82, 303; **3**: 21
- Dielectric constant, **6**: 75
- Electrical conductivity, **1**: 103; **2**: 86, 303; **6**: 135, 136
- Low temperature, **6**: 126
- Magnetic field, effect of, **6**: 422, 423
- Powdered, **6**: 147
- Electrons, thermal emission of, **6**: 53
- Emission spectra, **5**: 285
- Ettingshausen effect, **6**: 419
- Evaporation from hot filament, **5**: 53
- Hall effect, **6**: 416, 417
- Hardness, **2**: 303
- Heat of vaporization, **1**: 102
- Ionization, atomic, **6**: 122
- γ -Iron, diffusion in, **5**: 77
- Isotopes, **1**: 45
- J*-Phenomenon, **6**: 1
- Magnetic susceptibility, **6**: 354
- Peltier coefficient, **6**: 227
- Persistent lines, **5**: 323

Carbon.—(Continued)

- Photoelectric threshold, **6**: 68
 Quantum numbers, **5**: 408
 Specific heat, **1**: 103; **2**: 85, 303
 Spectral series, **5**: 396
 Thermal conductivity, **2**: 85; **5**: 216, 217, 220
 Crystals, **5**: 231
 Thermal expansion, **1**: 103; **2**: 83, 303; **3**: 21
 Thermionic work function, **6**: 53, 56
 Thermochemistry, **5**: 181
 Thermoelectric properties, **6**: 214
 Thomson coefficient, **6**: 228
 Transmission of radiant energy, **5**: 269
 Vapor pressure, **3**: 205
 X-ray crystal structure, **1**: 340
 X-ray emission spectra, **6**: 36
 X-rays, absorption coefficient, **6**: 13–16
 X-rays, scattered, distribution of, **6**: 18
 X-rays, scattering, modification by, **6**: 17
 X-rays, scattering coefficient, **6**: 17
 Zeeman effect, **5**: 420
 See also Diamond, Graphite.
 -Aluminum*-Chromium-Iron
 -Aluminum*-Copper-Iron-Manganese
 -Aluminum*-Iron
 -Aluminum*-Iron-Manganese-Nickel
 -Aluminum*-Iron-Silicon
 -Ammonia*
 -Boron*-Iron
 -Cerium-Chromium-Iron
 Endurance limits, **2**: 605
 -Cerium-Chromium-Iron-Nickel
 Endurance limits, **2**: 605
 -Cerium-Iron
 Endurance limits, **2**: 605
 -Cerium-Iron-Nickel
 Endurance limits, **2**: 605
 -Chromium
 Density, **2**: 594
 -Chromium-Copper-Iron
 Electrical conductivity, **6**: 179
 -Chromium-Copper-Iron-Nickel
 Endurance limits, **2**: 606
 -Chromium-Copper-Iron-Tungsten
 Electrical conductivity, **6**: 189
 -Chromium-Iron
 Electrical conductivity, **6**: 179
 Endurance limits, **2**: 600, 603, 605, 606
 Equilibrium diagram, **2**: 455
 Specific heat, **5**: 119
 Thermal expansion, **2**: 464, 470, 471, 472
 -Chromium-Iron-Manganese
 Electrical conductivity, **6**: 181
 -Chromium-Iron-Manganese-Molybdenum-Nickel
 Electrical conductivity, **6**: 179
 -Chromium-Iron-Manganese-Molybdenum-Silicon
 Electrical conductivity, **6**: 183
 -Copper-Iron-Manganese-Nickel
 Electrical conductivity, **6**: 186
 -Chromium-Iron-Manganese-Silicon
 Electrical conductivity, **6**: 181
 -Chromium-Iron-Manganese-Silicon-Tungsten
 Electrical conductivity, **6**: 189
 -Chromium-Iron-Molybdenum
 Endurance limits, **2**: 603, 605
 -Chromium-Iron-Molybdenum-Nickel
 Endurance limits, **2**: 604, 605
 -Chromium-Iron-Molybdenum-Tungsten-Vanadium
 Electrical conductivity, **6**: 190
 -Chromium-Iron-Molybdenum-Vanadium
 Electrical conductivity, **6**: 183
 -Chromium-Iron-Nickel
 Electrical conductivity, **6**: 185
 Endurance limits, **2**: 600–608
 Thermal expansion, **2**: 472

Carbon.—(Continued)

- Chromium-Iron-Nickel-Silicon
 Electrical conductivity, **6**: 179
 -Chromium-Iron-Nickel-Uranium
 Mechanical properties, **2**: 478
 -Chromium-Iron-Nickel-Vanadium
 Endurance limits, **2**: 600, 604, 605
 -Chromium-Iron-Silicon
 Electrical conductivity, **6**: 179
 Thermal expansion, **2**: 469
 -Chromium-Iron-Tungsten
 Thermal expansion, **2**: 472
 -Chromium-Iron-Uranium
 Mechanical properties, **2**: 478
 -Chromium-Iron-Vanadium
 Endurance limits, **2**: 603, 606
 Thermal expansion, **2**: 472
 -Chromium-Tungsten
 Density, **2**: 594
 -Cobalt-Iron-Manganese-Silicon
 Electrical conductivity, **6**: 178
 -Copper-Iron-Manganese
 Electrical conductivity, **6**: 182
 -Copper-Iron-Manganese-Silicon
 Electrical conductivity, **6**: 183
 -Copper-Iron-Nickel
 Electrical conductivity, **6**: 186
 -Iron
 Electrical conductivity, **6**: 172, 173, 174, 198
 Endurance limits, reversed direct stresses, **2**: 600–608
 Equilibrium diagram, **2**: 450, 609
 Joule effect, **6**: 440
 Magnetic properties, **6**: 379
 Specific heat, **5**: 118
 Thermal expansion, **2**: 464, 470, 472
 Viscosity, liquid, **5**: 6, 7
 Volume change due to tempering, **2**: 477
 -Iron-Manganese
 Electrical conductivity, **6**: 180
 Thermal expansion, **2**: 467, 471
 -Iron-Manganese-Molybdenum
 Electrical conductivity, **6**: 183
 -Iron-Manganese-Molybdenum-Nickel
 Electrical conductivity, **6**: 186
 -Iron-Manganese-Nickel
 Electrical conductivity, **6**: 186
 Specific heat, **5**: 119
 -Iron-Manganese-Nickel-Silicon
 Electrical conductivity, **6**: 186
 -Iron-Manganese-Silicon
 Electrical conductivity, **6**: 181, 182, 188
 Endurance limits, **2**: 604
 Specific heat, **5**: 119
 -Iron-Manganese-Silicon-Tungsten
 Electrical conductivity, **6**: 189
 -Iron-Manganese-Tungsten
 Electrical conductivity, **6**: 183, 189
 Specific heat, **5**: 119
 -Iron-Molybdenum
 Electrical conductivity, **6**: 183
 Endurance limits, **2**: 605
 Thermal expansion, **2**: 467, 472
 -Iron-Molybdenum-Nickel
 Electrical conductivity, **6**: 187
 Endurance limits, **2**: 604, 605
 -Iron-Molybdenum-Vanadium
 Electrical conductivity, **6**: 183
 -Iron-Nickel
 Electrical conductivity, **6**: 184
 Endurance limits, **2**: 600–608
 Mechanical properties, **2**: 481
 Thermal expansion, **2**: 472
 -Iron-Nickel-Silicon
 Electrical conductivity, **6**: 187
 -Iron-Nickel-Uranium
 Mechanical properties, **2**: 478

Carbon.—(Continued)

- Iron-Nickel-Vanadium
 Endurance limits, **2**: 605
 -Iron-Nickel-Zirconium
 Endurance limits, **2**: 605
 -Iron-Phosphorus
 Equilibrium diagrams, **2**: 454
 -Iron-Phosphorus-Sulfur
 Electrical conductivity, **6**: 173
 -Iron-Silicon
 Electrical conductivity, **6**: 188
 Equilibrium diagrams, **2**: 454
 Magnetic properties, **6**: 379
 Specific heat, **5**: 119
 Thermal expansion, **2**: 472, 474
 -Iron-Sulfur
 Electrical conductivity, **6**: 173
 -Iron-Tantalum
 Electrical conductivity, **6**: 188
 -Iron-Titanium
 Electrical conductivity, **6**: 188
 Equilibrium diagram, **2**: 455
 Mechanical properties, **2**: 478
 -Iron-Tungsten
 Density, **2**: 594
 Electrical conductivity, **6**: 189
 Equilibrium diagram, **2**: 455
 Thermal expansion, **2**: 467, 472
 -Iron-Tungsten-Vanadium
 Electrical conductivity, **6**: 190
 -Iron-Uranium
 Mechanical properties, **2**: 479
 -Iron-Vanadium
 Electrical conductivity, **6**: 188
 Endurance limits, **2**: 605–607
 Thermal expansion, **2**: 472
 -Lanthanum
 Density, **2**: 594
 -Manganese
 Density, **2**: 594
 -Molybdenum
 Density, **2**: 594
 Hardness, **2**: 593
 -Thorium
 Density, **2**: 594
 -Tungsten
 Density, **2**: 594
 -Vanadium
 Density, **2**: 594
 Freezing point-solubility, **4**: 30
Carbon black
 Moisture content at various humidities, **2**: 325
 Rubber, use in, **2**: 286, 290
Carbon bronze, **2**: 373, 561
Carbon dioxide
 Accommodation coefficient, **5**: 53
 Activity function in hydrogen and nitrogen, **7**: 243
 Adsorption by blood charcoal, **3**: 251
 Adsorption by wood charcoal, **3**: 250
 Adsorption on glass, **3**: 251
 Birefringence, electric, **7**: 110
 Boiling point, **1**: 53; **3**: 235
 Compressibility, **3**: 11
 Liquid, **3**: 37, 38
 Contact potential, **6**: 57
 Copper, permeability of, **5**: 76
 Critical constants, **3**: 12, 235, 248
 Decomposition pressure of hydrate, **7**: 244
 Density
 Gas, **3**: 3, 11
 Solid, **1**: 112, 341; **3**: 43
 Dielectric constant
 Gas, **6**: 75, 79
 Liquid, **6**: 76, 77
 Diffusion in ethyl alcohol, **5**: 73
 Diffusion in water, **5**: 65
 Dispersion formulas, **7**: 11
 Electrons, absorption of, by, **6**: 61

* Data for system will be found under this compound in Index. Full explanation on page vii.

Carbon dioxide.—(Continued)

- Electrons, attachment of, to form ions, 6: 117
- Electrons, secondary emission of, 6: 63
- Free energy, 7: 243
- Formation, 7: 243
- Methanization, 7: 244
- Reaction with graphite, 7: 243
- Reaction with hydrogen, 7: 243
- Reaction with sulfur dioxide, 7: 244
- Solution, 7: 244
- Freezing point lowering of aqueous solution, 4: 255, 261
- Gamma rays, absorption coefficient, 6: 21
- Heat of adsorption on charcoal, 5: 139, 140
- Heat of compression, 5: 146
- Heat of formation, 5: 181
- Heat of fusion, 5: 131
- Heat of solution, 7: 244
- Heat of vaporization, 3: 207; 5: 136, 138
- Ionization by accelerated electrons, 6: 121
- Ionization by α -particles, 6: 122
- Ionization by β -particles, 6: 121
- Ionization by γ -rays, 6: 123
- Ionization by phosphorus vapor, 6: 124
- Ionization by X-rays, 6: 123
- Ions, diffusivity of, in, 6: 115
- Ions, mobility of, in, 6: 111, 114
- Ions, recombination of, in, 6: 115
- Joule-Thomson effect, 5: 144
- Light, transmission of
 - Gas, 5: 265
 - Liquid, 5: 265
- Magnetic susceptibility, 6: 356
- Melting point under pressure, 4: 12
- Molecular data, 1: 92
- Orthobaric density, 3: 235
- Photochemical decomposition, 7: 166
- Polarization of light scattered by, 5: 265, 267
- Potassium cyanide, reaction of, 7: 307
- Refractivity, 7: 9
- Rubber, permeability of, to, 2: 272; 5: 76
- Solubility in
 - Aqueous solutions, 3: 279
 - Colloidal solutions, 3: 281
 - Copper, molten, 3: 270
 - Non-aqueous liquids, 3: 265
 - Water, 3: 260
- Sound, velocity of, in, 6: 462, 463
- Sound, velocity of, in tubes, 6: 466
- Specific heat
 - Gas, 5: 80, 83; 7: 243
 - Liquid, 5: 86, 114
 - Solid, 5: 86, 95; 7: 239
- Surface tension, 4: 447
- Thermal conductivity, 5: 214, 215
- Thermal expansion, gas, 3: 11
- Toxicology, 2: 319
- Transmission of radiant energy, 5: 270
- Vapor pressure
 - Aqueous solution, 3: 363
 - Liquid, 3: 235
 - Solid, 3: 207
- Vapor pressure above 1 atm., 3: 235
- Verdet constant
 - Gas, 6: 425
 - Dispersion, 6: 432
 - Liquid, 6: 426
 - Dispersion, 6: 433
- Viscosity
 - Aqueous solution, 5: 20
 - Gas, 5: 4
 - Liquid, 5: 11
- Volume change on melting, 4: 12
- X-ray diffraction data, 1: 341
- X-rays, absorption coefficient, 6: 13, 16
- Acetylene*

Carbon dioxide.—(Continued)

- Air*
- Ammonia*
- Aniline*
- Barium carbonate*
- Barium oxide*
- Calcium carbonate*-Calcium sulfate-Sodium chloride-Sodium sulfate
- Calcium carbonate*-Sodium chloride
- Calcium oxide*
- Carbon monoxide
 - Diffusion coefficient, 5: 62
- Chlorine
 - Freezing point-solubility, 4: 31
- Cupric oxide
 - Vapor pressure, aqueous solution, 3: 377
- Ethane
 - Vapor pressure, 3: 358, 381
- Ethyl chloride
 - Freezing point-solubility, 4: 98
- Ethyl ether
 - Freezing point-solubility, 4: 98
 - Vapor pressure, 3: 358
- Ferrous oxide
 - Vapor pressure, aqueous solution, 3: 377
- Hydrogen
 - Diffusion coefficient, 5: 62
 - Equilibrium constant of reaction, 7: 244
 - Ions, mobility of, in, 6: 113
 - P-V-T relations, 3: 17
 - Sound, velocity of, in, 6: 463
 - Thermal conductivity, 5: 214
 - Vapor pressure, 3: 353
 - Viscosity, 5: 5
- Hydrogen chloride
 - P-V-T relations, 3: 17
- Hydrogen sulfide
 - Freezing point-solubility, 4: 42, 77, 188
- Isopentane
 - Vapor pressure, 3: 359
- Lead oxide
 - Vapor pressure, aqueous solution, 3: 377
- Magnesium oxide
 - Vapor pressure, aqueous solution, 3: 377
- Manganous oxide
 - Vapor pressure, aqueous solution, 3: 377
- Methane
 - Diffusion coefficient, 5: 62
- Methyl alcohol
 - Freezing point-solubility, 4: 213
- Methyl chloride
 - Vapor pressure, 3: 286, 358
- Methyl ether
 - Freezing point-solubility, 4: 213
- Naphthalene
 - Vapor pressure, 3: 359
- Naphthalene-Picric acid
 - Vapor pressure, 3: 375
- Nitrobenzene
 - Vapor pressure, 3: 359
- o-Nitrophenol
 - Solubility, mutual, 3: 397
- Nitrous oxide
 - Diffusion coefficient, 5: 62
 - Vapor pressure, 3: 355, 381
- Oxygen
 - Diffusion coefficient, 5: 62
 - P-V-T relations, 3: 17
 - Vapor pressure, 3: 352, 381
 - Viscosity, 5: 5
- Picric acid
 - Vapor pressure, 3: 359*
- Silver oxide
 - Vapor pressure, aqueous solution, 3: 377

Carbon dioxide.—(Continued)

- Strontium oxide
 - Vapor pressure, aqueous solution, 3: 377
- Sulfur dioxide
 - Freezing point-solubility, 4: 42, 77, 187
 - Surface tension, 4: 442
 - Vapor pressure, 3: 285, 354, 381
- Toluidine (o-, m-, p-)
 - Vapor pressure, 3: 359
- Urethan
 - Vapor pressure, 3: 358
- Water
 - P-V-T relations, 3: 17
- Zinc oxide
 - Vapor pressure, aqueous solution, 3: 377

Carbon disulfide

- Absorption spectra, 5: 331, 334
- Azeotropic mixtures, 3: 318, 324
- Birefringence, electric, 7: 110
- Boiling point, 3: 231, 330
- Compressibility, 3: 41
- Condensation on ions and nuclei, 6: 117
- Critical point data, 3: 231, 248
- Cryoscopic constant, 4: 183
- Density
 - Liquid, 3: 23
 - Solid, 3: 44
- Dielectric constant
 - Gas, 6: 75
 - Liquid, 6: 76
 - Solid, 6: 76
- Diffusion of vapor in gases, 5: 62
- Electrical conductivity, 6: 143
- X-rays, effect of, 6: 6
- Emission, spectral, 5: 257
- Faraday effect, lag in, 6: 434
- Flash point, 2: 161
- Heat of adsorption on charcoal, 5: 139
- Heat of combustion, 5: 169
- Heat of formation, 5: 181
- Heat of vaporization, 5: 136, 138
- Heat of wetting by, 5: 142
- Ignition temperature, 2: 174
- Inflammability, limits of, 2: 180
- Internal pressure, 4: 19
- Ionization of vapor by α -particles, 6: 122
- Ionization of vapor by β -particles, 6: 121
- Ionization of vapor by γ -rays, 6: 123
- Magnetic susceptibility, 6: 356
- Melting point, 1: 54
- Orthobaric density, 3: 231
- Photoelectric threshold, 6: 68
- Polarization of light reflected from, 5: 261
- Polarization of light scattered by
 - Gas, 5: 265
 - Liquid, 5: 266
- Refractive index
 - Gas, 7: 10
 - Liquid, 7: 12, 14, 34, 78
- Solidification point, 1: 61
- Solubility in water, 3: 387
- Sound, velocity of
 - Gas, 6: 462, 463
 - Liquid, 6: 464
- Specific heat
 - Gas, 5: 80, 81
 - Liquid, 5: 107, 114
 - Pressure, effect of, 5: 114
- Surface tension, 4: 436, 447
- Pressure, effect of, 4: 475
- Thermal conductivity
 - Gas, 5: 214, 215
 - Liquid, 5: 227
 - Pressure, effect of, 5: 227
- Toxicology, 2: 319
- Transmission of radiant energy, 5: 270
- Vapor pressure, 3: 213

* Data for system will be found under this compound in Index. Full explanation on page vii.

Carbon disulfide.—(Continued)

Vapor pressure above 1 atm., **3: 231**
 Verdet constant
 Gas, **6: 425**
 Liquid, **6: 426, 427**
 Dispersion, **6: 433, 434**
 Viscosity
 Gas, **5: 3**
 Liquid, **5: 26, 27, 32; 7: 213, 222**
 X-ray diffraction bands, **1: 351**
 -Acenaphthene*
 -Acetanilide*-Acetone
 -Acetic acid*
 -Acetone*
 -Acetone*-Picric acid
 -Aluminum bromide*
 -Aluminum bromide*-Benzenesulfone chloride
 -Aluminum bromide*-Benzophenone
 -Aluminum bromide*-Benzoyl chloride
 -Aluminum bromide*-p-Dibromobenzene
 -Aluminum bromide*-Phosphorus oxy-chloride
 -Aluminum iodide*
 -Amylene*
 -Anethole*
 -Aniline*
 -Aniline salicylate*
 -Anisole*
 -Anthracene*
 -Antimony triiodide*
 -Arsenous iodide*
 -Azobenzene*
 -Benzaldehyde*
 -Benzene*
 -Benzenesulfone chloride*
 -Benzil*
 -Benzoic acid*
 -Benzophenone*
 -Benzyl benzoate*
 -Bromine*
 -Bromobenzene*
 -Bromonaphthalene*
 -d-β-Butyl acetate*
 -Butyric acid*
 -Camphor*
 -Camphor*-Ethyl ether
 -Camphoric acid*
 -Carbazole*
 -Carbon tetrachloride
 Boiling point, **3: 312**
 Density, **3: 143**
 Dielectric constant, **6: 101**
 Heat of solution, **5: 150, 155**
 Vapor pressure, **3: 285**
 -Carbon tetrachloride-Iodine
 Freezing point-solubility, **4: 268**
 -Chloral alcoholate
 Boiling point elevation, **3: 330**
 -Chloroacetic acid
 Distribution coefficients in water, **3: 423**
 -Chlorobenzene
 Density, **3: 145**
 -Chloroform
 Compressibility, **3: 440**
 Density, **3: 144; 7: 77**
 Dielectric constant, **6: 101**
 Heat of solution, **5: 151, 155, 157**
 Refractive index, **7: 77**
 Dispersion, **7: 102**
 Specific heat, **5: 125**
 Surface tension, **4: 471**
 Vapor pressure, **3: 286**
 -Chloroform-Iodine
 Freezing point-solubility, **4: 268**
 -Chromyl chloride
 Boiling point elevation, **3: 331**
 -Cinnamaldehyde
 Density, **3: 146**
 -m-Cresol
 Vapor pressure, **3: 286**

Carbon disulfide.—(Continued)

-p-Dibromobenzene
 Density, **3: 145**
 Freezing point-solubility, **4: 172**
 -Dimethyl acetylmaleate
 Boiling point elevation, **3: 330**
 -Diphenyl
 Density, **3: 146**
 -Diphenylamine
 Boiling point elevation, **3: 330**
 Heat of solution, **5: 151**
 -Ethyl acetate
 Density, **3: 145**
 Heat of solution, **5: 151, 155**
 Viscosity, **5: 32**
 -Ethyl acetoacetate
 Density, **3: 145**
 -Ethyl alcohol
 Compressibility, **3: 440**
 Density, **3: 145; 7: 78**
 Dielectric constant, **6: 101**
 Distribution coefficients in water, **3: 400, 424**
 Heat of solution, **5: 151, 157**
 Miscibility in water, **3: 410**
 Refractive index, **7: 78**
 Dispersion, **7: 102**
 Solubility, mutual, **3: 394**
 Vapor pressure, **3: 286**
 Viscosity, **5: 32**
 -Ethyl alcohol-Iodine
 Freezing point-solubility, **4: 268**
 -Ethyl ether
 Density, **3: 145**
 Dielectric constant, **6: 101**
 Heat of solution, **5: 151, 155**
 Refractive index, **7: 78**
 Dispersion, **7: 102**
 Specific heat, **5: 126**
 Surface tension, **4: 471**
 Vapor pressure, **3: 375**
 Vapor pressure, partial, **3: 286**
 Viscosity, **5: 32**
 -Ethyl ether-Iodine
 Freezing point-solubility, **4: 268**
 -Ethyl ether-Naphthalene
 Vapor pressure, **3: 375**
 -Ethyl ether-Picric acid
 Vapor pressure, **3: 375**
 -Ethyl iodide
 Density, **3: 144**
 -Ethyl nitrate
 Density, **3: 144; 7: 78**
 Refractive index, **7: 78**
 Dispersion, **7: 102**
 -Ethylene bromide
 Density, **3: 144**
 Dielectric constant, **6: 101**
 Heat of solution, **5: 155**
 -Ethylene chloride
 Density, **3: 144**
 Surface tension, **4: 471**
 -Ethylxanthic acid
 Distribution coefficients in water, **3: 428**
 -Formic acid
 Distribution coefficients in water, **3: 422**
 Solubility, mutual, **3: 394**
 -Gallic acid
 Density, **3: 146**
 -Heptane
 Density, **3: 146**
 Dielectric constant, **6: 101**
 Heat of solution, **5: 151**
 -Iodine
 Boiling point elevation, **3: 330**
 Density, **3: 132**
 Distribution coefficients in
 Potassium iodide solution, **3: 420**
 Water, **3: 420**

-Iodine.—(Continued)

Freezing point-solubility, **4: 33**
 Viscosity, **5: 26**
 -Iodine-Sulfur
 Boiling point elevation, **3: 348**
 Freezing point-solubility, **4: 270**
 -Isobutyl alcohol
 Density, **3: 145; 7: 78**
 Refractive index, **7: 78**
 Dispersion, **7: 102**
 Verdet constant, **6: 427**
 -Isobutyric acid
 Density, **3: 145; 7: 78**
 Refractive index, **7: 78**
 Dispersion, **7: 102**
 Verdet constant, **6: 427**
 -Isovaleric acid
 Density, **3: 145; 7: 78**
 Refractive index, **7: 78**
 Dispersion, **7: 102**
 Verdet constant, **6: 427**
 -Mercuric bromide
 Freezing point-solubility, **4: 48**
 -Mercuric chloride
 Freezing point-solubility, **4: 48**
 -Mercuric iodide
 Freezing point-solubility, **4: 48**
 -Methyl acetate
 Boiling point, **3: 312**
 -Methyl alcohol
 Interfacial tension, **4: 439**
 Solubility, mutual, **3: 394, 397**
 Specific heat, **5: 116**
 Surface tension, **4: 471**
 Vapor pressure, **3: 359**
 -Methyl formate
 Density, **3: 144**
 -Methyl iodide
 Density, **3: 144**
 Viscosity, **5: 32**
 -Methylal
 Density, **3: 145**
 Refractive index, **7: 78**
 Dispersion, **7: 102**
 Vapor pressure, **3: 375**
 Vapor pressure, partial, **3: 286**
 -Methylal-Naphthalene
 Vapor pressure, **3: 375**
 -Methylal-Picric acid
 Vapor pressure, **3: 375**
 -Methylene iodide
 Density, **3: 144**
 -Naphthalene
 Boiling point elevation, **3: 330**
 Density, **3: 146**
 Freezing point-solubility, **4: 98**
 Heat of solution, **5: 151**
 Specific heat, **5: 126**
 -Nitrobenzene
 Density, **3: 145**
 Freezing point-solubility, **4: 98**
 Vapor pressure, **3: 286**
 -Nitronaphthalene
 Heat of solution, **5: 151**
 -Nitrotoluene (o-, p-)
 Density, **3: 145**
 -d-β-Octyl acetate
 Density, **3: 146**
 -Oleates
 Dielectric constant, **6: 104**
 -Oleic acid
 Vapor pressure lowering, **3: 300**
 -Paraldehyde
 Density, **3: 145**
 Heat of solution, **5: 155**
 -Phenanthrene
 Boiling point elevation, **3: 330**
 Freezing point-solubility, **4: 172**
 -Phenol
 Distribution coefficients in water
 3: 428

* Data for system will be found under this compound in Index. Full explanation on page vii.

Carbon disulfide.—(Continued)

- Phenyl acetylsalicylate*
Boiling point elevation, **3**: 331
- Phenyl benzoate*
Boiling point elevation, **3**: 330
- Phenyl isothiocyanate*
Boiling point elevation, **3**: 330
- Phenyl salicylate*
Boiling point elevation, **3**: 330
- Phenyl thiocyanate*
Density, **3**: 145
- Phosphorus*
Boiling point elevation, **3**: 330
Freezing point-solubility, **4**: 36
Solubility, mutual, **3**: 394
- Phosphorus-Sulfur*
Boiling point elevation, **3**: 348
- Phosphorus heptasulfide*
Freezing point-solubility, **4**: 48
- Phosphorus oxychloride*
Boiling point elevation, **3**: 330
- Phosphorus sesquisulfide*
Boiling point elevation, **3**: 330
Freezing point-solubility, **4**: 48, 190
- Phosphorus trichloride*
Density, **3**: 136
- Pinene*
Heat of solution, **5**: 155
- Propyl alcohol*
Density, **3**: 145
- Salicylic acid*
Density, **3**: 145
- Selenium*
Freezing point-solubility, **4**: 36
- Selenium-Sulfur*
Freezing point-solubility, **4**: 269, 270
- Stannic chloride*
Density, **3**: 137; **7**: 77
Refractive index, **7**: 77
Dispersion, **7**: 102
- Stannic iodide*
Freezing point-solubility, **4**: 48
- Stearic acid*
Density, **3**: 146
- Sulfur*
Boiling point elevation, **3**: 330
Density, **3**: 132
Dielectric constant, **6**: 101
Freezing point-solubility, **4**: 34
Viscosity, **5**: 27
- Sulfur dioxide*
Density, **3**: 135
Viscosity, **5**: 27
- Tetryl*
Freezing point-solubility, **4**: 98
- Toluene*
Density, **3**: 146
Dielectric constant, **6**: 101
Heat of solution, **5**: 158
Surface tension, **4**: 471
Vapor pressure, **3**: 286
Viscosity, **5**: 32
- Trional*
Boiling point elevation, **3**: 330
- Turpentine*
Density, **3**: 146
- m-Xylene*
Dielectric constant, **6**: 101

Carbon lamp, temperature, 5: 247**Carbon monoxide**

- Adsorption by platinum black, **3**: 253
- Adsorption by wood charcoal, **3**: 250
- Band spectra, **5**: 412, 417
- Boiling point, **3**: 230
- Copper, permeability of, **5**: 76
- Critical point data, **3**: 230, 248
- Critical potentials, **6**: 73
- Density
Gas, **3**: 3
Liquid, **3**: 23
- Detonation, **2**: 185

Carbon monoxide.—(Continued)

- Dielectric constant, gas, **6**: 75
- Diffusion coefficient, **5**: 62
- Dispersion formula, **7**: 11
- Dissociation, work of, **6**: 73
- Electrons, absorption of, by, **6**: 61
- Electrons, attachment of, to form ions, **6**: 117
- Electrons, motion of, in, **6**: 116
- Electrons, secondary emission of, **6**: 63
- Entropy, **5**: 89
- Explosion in closed vessels, **2**: 188
- Explosive mixtures, limiting dilutions, **2**: 186
- Flame propagation in, **2**: 182
- Free energy, **7**: 243
- Formation, **7**: 243
- Methanization, **7**: 244
- Reaction with chlorine, **7**: 244
- Reaction with oxygen, **7**: 243
- Reaction with sulfur, **7**: 244
- Freezing point lowering of aqueous solution, **4**: 255
- Heat content, **5**: 89
- Heat of adsorption on charcoal, **5**: 141
- Heat of dissociation, **5**: 418
- Heat of formation, **5**: 181
- Heat of fusion, **5**: 131
- Heat of transition, **5**: 181
- Heat of vaporization, **5**: 136
- Igniting pressures, relative limiting, **2**: 181
- Ignition temperature, **2**: 173
- Inflammability, limits of, **2**: 177
- Ionization by electrons, **6**: 120
- Ionization by α -particles, **6**: 122
- Ions, mobility of, in, **6**: 111
- Ions, recombination of, in, **6**: 115
- Molecular data, **1**: 92
- Orthobaric density, **3**: 230
- Polarization of light scattered by, **5**: 265
- Refractivity, **7**: 8
- Rubber, permeability of, **5**: 77
- Solubility in
Aqueous solutions, **3**: 278
Copper, molten, **3**: 270
Non-aqueous liquids, **3**: 265
Non-aqueous solutions, **3**: 278
Water, **3**: 259
- Sound, velocity of, in, **6**: 462
- Specific heat
Gas, **5**: 80, 82, 86; **7**: 243
Liquid, **5**: 86, 89
Solid, **5**: 86, 89, 95
- Steel, permeability of, **5**: 76
- Surface tension, **4**: 441
- Thermal conductivity, **5**: 214, 215
- Thermal expansion, **3**: 16
- Thermodynamic potential, **5**: 89
- Toxicology, **2**: 319
- Vapor pressure
Liquid, **3**: 213
Solid, **3**: 207
- Vapor pressure above 1 atm., **3**: 230
- Viscosity, gas, **5**: 3
- Ammonia**
- Bromine**
- Carbon dioxide**
- Ethyl ether*
Boiling point, **3**: 312
- Ethylene*
Diffusion coefficient, **5**: 62
- Hydrogen*
Detonation of, **2**: 186
Diffusion, **5**: 62
Equilibrium constant of reaction, **7**: 244
Explosion in closed vessels, **2**: 190
Viscosity, **5**: 5
- Nitrogen*
Sound, velocity of, in, **6**: 463

Carbon monoxide.—(Continued)

- Oxygen*
Diffusion coefficient, **5**: 62
Viscosity, **5**: 5
- Sulfur*
Equilibrium constant of reaction, **7**: 244
- Tantalum*
Equilibrium constant of reaction, **7**: 288
- Tin*
Equilibrium constant of reaction, **7**: 247
- Vanadium*
Heat of reaction, **7**: 288
- Carbon selenosulfide**
Vapor pressure, **3**: 214
- Carbon steels**
Analyses, table of, **2**: 484
Compression tests, **2**: 493
Density, **2**: 516
Elastic properties, **2**: 515
Electrical conductivity, **6**: 175
Heat treatment, effect of, **6**: 200
Endurance limits, **2**: 600–608
Hardness, **2**: 494
Impact strength, **2**: 495
Magnetic properties, **6**: 374, 379, 388
Specific heat, **2**: 518
Tensile properties, **2**: 487
Thermal conductivity, **2**: 518
Thermal expansion, **2**: 470–472
Thermoelectric properties, **6**: 222, 224
Torsion tests, **2**: 493
Wiedemann effect, **6**: 441
X-ray diffraction data, **1**: 349
- Carbon subnitride**
Heat of combustion, **5**: 167
- Carbon suboxide**
Boiling point, **1**: 112, 162
Density, **1**: 112
Melting point, **1**: 112
Refractive index, **1**: 112, 165
Vapor pressure, **3**: 213
- Carbon sulfide, band spectra, 5: 412**
- Carbon tetrabromide**
Absorption spectra, **5**: 334
Allotropic forms, **4**: 13
Magnetic susceptibility, **6**: 361
Melting point under pressure, **4**: 13, 17
Transition temperature, **4**: 8
Triple point, **4**: 13
Volume change on melting, **4**: 13
- Aluminum bromide**
- Bromine**
- Carbon tetrachloride**
Absorption spectra, **5**: 331, 334
Allotropic forms, **4**: 13
Angle of contact, **4**: 434
Azeotropic mixtures, **3**: 318, 323
Birefringence, electric, **7**: 110
Boiling point, **3**: 215, 330
Compressibility, **3**: 35, 39
Condensation on ions and nuclei, **6**: 117
Critical point data, **3**: 245, 248
Cryoscopic constant, **4**: 183
Density, liquid, **3**: 28, 33
Dielectric constant, **6**: 82, 83, 105
Diffusion in methyl alcohol, **5**: 72
Electrical conductivity, **6**: 143
X-rays, effect of, **6**: 6
Entropy, **7**: 244
Faraday effect, lag in, **6**: 434
Free energy, **7**: 244
Heat content, **7**: 244
Heat of adsorption on charcoal, **5**: 139, 140
Heat of combustion, **5**: 168
Heat of formation, **5**: 181
Heat of fusion, **5**: 132
Heat of transition, **5**: 181

* Data for system will be found under this compound in Index. Full explanation on page vii.

Carbon tetrachloride.—(Continued)

Heat of vaporization, **5**: 136, 138
 Heat of wetting by, **5**: 142
 Interfacial tension against various solutions, **4**: 437
 Internal pressure, **4**: 19
 Ionization by α -particles, **6**: 122
 Ionization by β -particles, **6**: 121
 Ionization by γ -rays, **6**: 123
 Ionization by X-rays, **6**: 123
 Ions, mobility of, in, **6**: 111
 Magnetic susceptibility, **6**: 361
 Melting point, **1**: 54
 Melting point under pressure, **4**: 13, 18
 Orthobaric density, **3**: 245
 Polarization of light reflected from, **5**: 261
 Polarization of light scattered by
 Gas, **5**: 265
 Liquid, **5**: 266
 Refractive index
 Gas, **7**: 10
 Liquid, **7**: 12, 34, 77
 Solidification point, **1**: 62
 Solubility in water, **3**: 387
 Solubility of salts in, **4**: 205
 Sound, velocity of, in vapor, **6**: 462
 Specific heat
 Gas, **5**: 80, 81
 Liquid, **5**: 107
 Solid, **5**: 101
 Surface tension, **4**: 436, 447
 Thermal conductivity
 Gas, **5**: 214, 215
 Liquid, **5**: 228
 Toxicology, **2**: 319
 Transition temperature, **4**: 8
 Triple points, **4**: 13
 Vapor pressure
 Liquid, **3**: 213, 215
 Solid, **3**: 207
 Vapor pressure above 1 atm., **3**: 245
 Verdet constant, **6**: 426, 427
 Dispersion, **6**: 433
 Viscosity, **5**: 26, 27; **7**: 212, 222
 Volume change on melting, **4**: 13, 18
 -Acenaphthene*
 -Acetic acid*
 -Acetone*
 -Air*
 -Aluminum chloride*
 -Ammonia*
 -Aniline*
 -Aniline salicylate*
 -Anisole*
 -Anthracene*
 -Antimony pentachloride*
 -Benzene*
 -Benzene*-Ethyl alcohol
 -Benzene*-Iodine
 -Benzil*
 -Benzoic acid*
 -Bromine*
 -Bromoacetic acid*
 -Bromobenzene*
 - α -Bromonaphthalene*
 -Camphor*
 -Carbazole*
 -Carbon disulfide*
 -Carbon disulfide*-Iodine
 -Chlorine
 Boiling point elevation, **3**: 325
 Density, **3**: 131
 Distribution coefficients in water, **3**: 419
 Freezing point lowering, **4**: 36
 Freezing point-solubility, **4**: 31
 Viscosity, **5**: 26
 -Chlorine dioxide
 Distribution coefficients in water, **3**: 419

Carbon tetrachloride.—(Continued)

-Chloroacetic acid
 Distribution coefficients in water, **3**: 423
 -Chlorobenzene
 Density, **3**: 144
 Dielectric constant, **6**: 101
 -Chloroform
 Boiling point, **3**: 312
 Density, **3**: 143
 Freezing point-solubility, **4**: 98
 Heat of solution, **5**: 155
 Specific heat, **5**: 125
 Surface tension, **4**: 471
 Viscosity, **5**: 31
 -1-Chlorotetrahydronaphthalene
 Vapor pressure, **3**: 286
 -Chromyl chloride
 Boiling point elevation, **3**: 330
 -Cresol
 Vapor pressure, **3**: 285
 -p-Dibromobenzene
 Density, **3**: 143
 Freezing point-solubility, **4**: 172
 -Dichlorobenzene
 Density, **3**: 144
 - β , β -Dichlorodiethyl sulfide
 Freezing point-solubility, **4**: 98
 -Diethyl tartrate
 Density, **3**: 144
 -Diethylamine
 Distribution coefficients in water, **3**: 426
 -Dimethylpyrone picrate
 Boiling point elevation, **3**: 330
 - α , γ -Diphenyl- α , β -butene
 Boiling point elevation, **3**: 330
 -Erucic acid
 Heat of solution, **5**: 151
 -Ethyl acetate
 Boiling point, **3**: 312
 Density, **3**: 143
 Heat of solution, **5**: 151, 155
 Refractive index, **7**: 77
 Surface tension, **4**: 471
 Vapor pressure, partial, **3**: 285
 Viscosity, **5**: 32
 -Ethyl alcohol
 Boiling point, **3**: 312
 Density, **3**: 143
 Aqueous solution, **3**: 125
 Dielectric constant, **6**: 101
 Distribution coefficients in water, **3**: 400, 424
 Heat of solution, **5**: 151
 Miscibility in water, **3**: 410
 Vapor pressure, **3**: 358
 Viscosity, **5**: 31
 -Ethyl amyl ether
 Density, **3**: 144
 Dielectric constant, **6**: 101
 -Ethyl benzoate
 Boiling point elevation, **3**: 330
 -Ethyl ether
 Boiling point, **3**: 312
 Density, **3**: 143
 Dielectric constant, **6**: 101
 Heat of solution, **5**: 151
 -Ethyl iodide
 Refractive index, **7**: 77
 Surface tension, **4**: 471
 Vapor pressure, partial, **3**: 285
 Viscosity, **5**: 31
 -Ethylene bromide
 Boiling point, **3**: 312
 Density, **3**: 143
 Dielectric constant, **6**: 101
 Heat of solution, **5**: 155
 Refractive index, **7**: 77

Carbon tetrachloride.—(Continued)

-Ethylene bromide-Toluene
 Boiling point, **3**: 317
 Density, **3**: 196
 Refractive index, **7**: 96
 Vapor pressure, **3**: 292
 -Fluorene
 Freezing point-solubility, **4**: 172
 -Formic acid
 Distribution coefficients in water, **3**: 422
 Solubility, mutual, **3**: 394
 -Fumaric acid
 Freezing point-solubility, **4**: 98
 -Heptane
 Heat of solution, **5**: 151
 -1-Hydroxyisocaproic acid
 Distribution coefficients in water, **3**: 428
 -Iodine
 Boiling point elevation, **3**: 330
 Density, **3**: 132
 Distribution coefficients in water, **3**: 420
 Freezing point-solubility, **4**: 33
 -Iodine monochloride
 Freezing point-solubility, **4**: 42
 -Isobutyl alcohol
 Heat of solution, **5**: 151
 -Isobutyric acid
 Distribution coefficients in water, **3**: 426
 -Isovaleric acid
 Boiling point elevation, **3**: 300
 -Lauric acid
 Boiling point elevation, **3**: 330
 Heat of solution, **5**: 151
 -Maleic acid
 Freezing point-solubility, **4**: 98
 -Methyl acetate
 Density, **3**: 143
 -Methyl alcohol
 Density, **3**: 143
 Aqueous solution, **3**: 125
 Heat of solution, **5**: 150, 151
 Miscibility in water, **3**: 410
 -Methyl iodide
 Density, **3**: 143
 -Naphthalene
 Boiling point elevation, **3**: 330
 Density, **3**: 144
 Freezing point-solubility, **4**: 172
 Vapor pressure lowering, **3**: 300
 Viscosity, **5**: 32
 - β -Naphthyl benzoate
 Boiling point elevation, **3**: 330
 -Nitrobenzene
 Birefringence, magnetic, **7**: 112
 Vapor pressure, **3**: 285
 -Nitrogen sulfide
 Boiling point elevation, **3**: 330
 -Nitrogen tetroxide
 Freezing point-solubility, **4**: 44
 -Oleates
 Dielectric constant, **6**: 104
 -Palmitic acid
 Boiling point elevation, **3**: 330
 -Phenanthrene
 Density, **3**: 144
 Freezing point-solubility, **4**: 172
 Vapor pressure lowering, **3**: 300
 -Phenol
 Boiling point elevation, **3**: 330
 Distribution coefficients in water, **3**: 428
 -Phenyl benzoate
 Boiling point elevation, **3**: 330
 -Phosphorus oxybromide
 Boiling point elevation, **3**: 330
 -Phosphorus oxychloride
 Boiling point elevation, **3**: 300

* Data for system will be found under this compound in Index. Full explanation on page vii.

Carbon tetrachloride.—(Continued)

-Phosphorus pentachloride

Boiling point elevation, **3**: 330

-Piperine

Boiling point elevation, **3**: 330

-Propyl alcohol

Density, aqueous solution, **3**: 125Heat of solution, **5**: 151Miscibility in water, **3**: 410

-Pyridine

Density, **3**: 143Heat of solution, **5**: 151

-Pyridine acetate

Heat of solution, **5**: 151

-Quinoline

Boiling point elevation, **3**: 330

-Resorcinol

Distribution coefficients in water, **3**: 428

-Safrole

Boiling point elevation, **3**: 330

-Salicylic acid

Density, **3**: 144Heat of solution, **5**: 151

-Stearic acid

Density, **3**: 144

-Sulfur

Boiling point elevation, **3**: 330Freezing point-solubility, **4**: 34

-Sulfur dioxide

Density, **3**: 135Freezing point-solubility, **4**: 187Viscosity, **5**: 27

-Sulfur monochloride

Boiling point elevation, **3**: 330

-Tartaric acid

Density, **3**: 143

-Tetrachloroethane

Density, **3**: 143Viscosity, **5**: 31

-Tetrachloroethylene

Density, **3**: 143Viscosity, **5**: 31

-Tetrahydronaphthalene

Vapor pressure, **3**: 286

-Tetryl

Freezing point-solubility, **4**: 98

-Thymol

Freezing point-solubility, **4**: 98

-Toluene

Boiling point, **3**: 312Density, **3**: 144Heat of solution, **5**: 155, 157Refractive index, **7**: 77Vapor pressure, **3**: 285

-p-Toluidine

Boiling point elevation, **3**: 330Distribution coefficients in water, **3**: 430

-p-Toluidine chloroacetate

Boiling point elevation, **3**: 330

-p-Toluidine salicylate

Boiling point elevation, **3**: 330

-Triamylammonium picrate

Boiling point elevation, **3**: 330

-m-Xylene

Density, **3**: 144Dielectric constant, **6**: 101**Carbon tetraiodide**Absorption spectra, **5**: 334Magnetic susceptibility, **6**: 361**Carbondale silver**, **2**: 373; cf. 480**Carbonic acid**Electrical conductivity, aqueous solution, **6**: 261Free energy of aqueous solution, **7**: 244Free energy of ions, **7**: 244Heat of formation, **5**: 181Ionization constants, **7**: 244

See also Carbon dioxide.

-Ammonium hydroxide*

Carbonic acid.—(Continued)

-Calcium carbonate*

-Calcium carbonate*-Sodium chloride

Carbonites (explosives), **7**: 495**Carbonyl bromide**Heat of formation, **5**: 181**Carbonyl chloride.** See Phosgene.**Carbonyl sulfide**Absorption spectra, **5**: 331Boiling point, **3**: 231Critical point data, **3**: 231, 248Density, **3**: 23Gas, **3**: 3Free energy, **7**: 244Heat of combustion, **5**: 169Heat of formation, **5**: 181Solubility in non-aqueous liquids, **3**: 268Solubility in water, **3**: 261Vapor pressure, **3**: 213Vapor pressure above 1 atm., **3**: 231Viscosity, gas, **5**: 3**Carbonylferrocyanic acid**Heat of formation, **5**: 191**Carborundum**Compressibility, **2**: 87Crushing strength, **2**: 83Density, **1**: 113; **2**: 82, 87Electrical conductivity, **2**: 86Emission, spectral, **5**: 258Fusion temperature, **2**: 83Hardness, **2**: 87Refractive index, **1**: 113, 168; **7**: 19Specific heat, **2**: 87Sublimation temperature, **1**: 113, 162Temperature of failure under load, **2**: 83Thermal conductivity, **2**: 87Thermal expansion, **2**: 83, 87; **3**: 45X-rays, reflection of, by, **6**: 50**Carborundum brick**Density, **2**: 82Electrical conductivity, **2**: 86Expansion on heating, **2**: 84Porosity, **2**: 82Specific heat, **2**: 85Thermal conductivity, **2**: 85Thermal expansion, **2**: 83**Carboxylic acids**Carbon dioxide loss, kinetics of, **7**: 122**Carburite**, **2**: 373**Carcel unit**, definition, **1**: 35**Careco** (alloy), **2**: 373**Carminic acid**Diffusion in ethyl alcohol, **5**: 74

-Ethyl alcohol

Viscosity, **5**: 39**Carminite**, density, **1**: 129**Carnallite**Density, **1**: 158Liquid, **3**: 24Melting point, **1**: 158Refractive index, **1**: 158, 168**Carnauba wax** as rubber softener, **2**: 278

See also Waxes.

CarnegieiteDensity, **1**: 153Melting point, **1**: 153; **4**: 85Refractive index, **1**: 153, 169**Carnotite**, refractive index, **1**: 157, 173**Carpamic acid**Optical rotatory power, **7**: 466**Carpholite**Density, **1**: 137Refractive index, **1**: 137, 171**Carphosiderite**Density, **1**: 128Refractive index, **1**: 128, 167**Carpiline**, optical rotatory power, **7**: 475**Cartridge brass**, **2**: 373, 469, 555**Cartridge gilding**, **2**: 373, 555; cf. 469**Carvacrol**Absorption spectra, **5**: 333, 346Birefringence, **7**: 111Heat of vaporization, **5**: 138Magnetic susceptibility, **6**: 363Refractive index, **7**: 51Specific heat, **5**: 112Verdet constant, **6**: 430**Carvene**, azeotropic mixtures, **3**: 320-322**Carvol**Azeotropic mixtures, **3**: 319Dielectric constant, **6**: 95Surface tension, **4**: 460Viscosity, **7**: 221**Carvone**Absorption spectra, **5**: 346Birefringence, electric, **7**: 111Magnetic susceptibility, **6**: 363Optical rotatory power, **7**: 413Refractive index, **7**: 51Verdet constant, **6**: 426Dispersion, **6**: 433**Carvotanacetone**Optical rotatory power, **7**: 415Refractive index, **7**: 52**d-Carvoxime**Heat of fusion, **5**: 134Optical rotatory power, **7**: 143Pyroelectric effect, **6**: 209

-l-Carvoxime

Freezing point-solubility, **4**: 154

-Isoamyl acetate

Viscosity, **5**: 50**Case-hardening steel**, **2**: 374, 470, 488, 600, 606**Casein**Compressibility, aqueous solution, **3**: 440Refractive index in various solvents, **7**: 99

-Sodium chloride

Freezing point-solubility in water, **4**: 423**Cashmere**, **2**: 235**Casimeroedine**Optical rotatory power, **7**: 475**Casimiroic acid**Optical rotatory power, **7**: 467**Cassia oil**, emission, spectral, **5**: 257**Cassiterite**Compressibility, **3**: 50Density, **1**: 114Dielectric constant, **6**: 99Refractive index, **1**: 114, 167Thermal conductivity, **5**: 232Thermal expansion, **3**: 43

See also Stannic oxide.

Castor oilAbsorption spectra, **5**: 334Compressibility, **2**: 209Density, **2**: 209Dielectric constant, **2**: 211Electrical conductivity, **6**: 146Heat of adiabatic expansion, **5**: 147Ignition temperature, **2**: 151Thermal conductivity, **5**: 228Viscosity, **2**: 209Pressure, effect of, **2**: 209

-Benzene*

-Petroleum

Dielectric constant, **6**: 103

-Toluene

Dielectric constant, **6**: 103**Catalase**, **7**: 157**Catalysis**, **7**: 113**Catalysts**, X-ray diffraction data, **2**: 357**Catechin**, optical rotatory power, **7**: 462**Catechol**Absorption spectra, **5**: 339Boiling point elevation in aqueous solution, **3**: 327Chemical properties, **2**: 242Density, aqueous solution, **3**: 114

* Data for system will be found under this compound in Index. Full explanation on page vii.

Catechol.—(Continued)

- Flash point, **2**: 161
 Solubility in water, **4**: 253
 -Acetamide*
 -Acetone*
 -Acetophenone*
 -Acridine*
 -*m*-Aminophenol*
 -Ammonia*
 -Aniline*
 -Antipyrine*
 -Azobenzene*
 -Benzamide*
 -Benzene*
 -Benzhydrol*
 -Benzophenone*
 -Camphor*
 -Carbazole*
 -Cineole
 Freezing point-solubility, **4**: 138
 -Cinnamic acid
 Freezing point-solubility, **4**: 138
 -Dimethyl oxalate
 Freezing point-solubility, **4**: 114
 -Diphenylamine
 Freezing point-solubility, **4**: 138
 -Diphenylmethane
 Freezing point-solubility, **4**: 138
 -Ethyl ether
 Boiling point elevation, **3**: 341
 -Fenchone
 Freezing point-solubility, **4**: 138
 -Hydrogen chloride
 Freezing point-solubility in water, **4**: 396
 -Hydroquinol
 Freezing point-solubility, **4**: 137
 -Hydroquinol- α -Nitronaphthalene
 Freezing point-solubility, **4**: 169
 -Hydroquinol-Resorcinol
 Freezing point-solubility, **4**: 169
 -*m*-Hydroxybenzaldehyde
 Freezing point-solubility, **4**: 178
 -Naphthalene
 Freezing point-solubility, **4**: 138
 -Naphthylamine (α -, β -)
 Freezing point-solubility, **4**: 138
 - α -Nitronaphthalene
 Freezing point-solubility, **4**: 138
 - α -Nitronaphthalene-Resorcinol
 Freezing point-solubility, **4**: 169
 -Phenylenediamine (*o*-, *m*-, *p*-)
 Freezing point-solubility, **4**: 137
 -Picric acid
 Freezing point-solubility, **4**: 119
 -Resorcinol
 Freezing point-solubility, **4**: 137
 -Succinic acid
 Freezing point-solubility, **4**: 114
 -Succinimide
 Freezing point-solubility, **4**: 113
 -*p*-Toluidine
 Freezing point-solubility, **4**: 137
 -Trimethylcarbinol
 Freezing point-solubility, **4**: 115
 -Triphenylcarbinol
 Freezing point-solubility, **4**: 138
 -Triphenylmethane
 Freezing point-solubility, **4**: 138
 Catgut, moisture content at various humidities, **2**: 325
 Cathodoluminescence, **5**: 387
 Catlinite, thermal conductivity, **5**: 217
 Caulophyllosaponin
 Optical rotatory power, **7**: 465
 Caustic soda cells, **6**: 317
 Ceco, **2**: 374, 562
 Cedar wood
 Density, **2**: 313
 Thermal conductivity, **2**: 313

- Cedrene, optical rotatory power, **7**: 461
 Ceiba wood
 Density, **2**: 313
 Thermal conductivity, **2**: 313
 Celestial pole, **1**: 35
 Celestial spectra
 Unidentified lines of, **5**: 383
 Celestial sphere, definition, **1**: 35
 Celestite
 Compressibility, **3**: 50
 Electrical conductivity, aqueous solution, **6**: 258
 Magnetic susceptibility, **6**: 364
 Thermal conductivity, **5**: 232
 See also Strontium sulfate.
 Cell constants, standard values, **6**: 230
 Cellobiose
 Heat of combustion, **5**: 166
 Optical rotatory power, **2**: 353
 Cellobiose derivatives
 Optical rotatory power, **7**: 400
 Cellobiose octoacetate
 Heat of combustion, **5**: 167
 β -Cellulose, solubility in aqueous ethyl alcohol, **4**: 405
 Cellose derivatives
 Optical rotatory power, **7**: 400
 Cellulak, dielectric strength, **2**: 310
 Celluloid, **2**: 296
 Combustion, rate of, **2**: 297
 Density, **2**: 314
 Magnetic susceptibility, **6**: 364
 X-rays, absorption coefficient, **6**: 16
 Cellulose
 Cuprammonium solution, viscosity of, **5**: 24
 Density, **2**: 314
 Dielectric constant, **2**: 310
 Electrical conductivity, **2**: 310
 Heat of combustion, **5**: 167
 Heat of wetting, **5**: 143
 Thermal conductivity, **2**: 314
 X-ray diffraction data, **2**: 357
 Cellulose acetate, moisture content at various humidities, **2**: 323
 -Acetone*
 Cellulose lacquer industry, air conditions for application of, **2**: 322
 Celotex, **2**: 46
 Density, **2**: 313
 Thermal conductivity, **2**: 313
 Celsius
 Density, **1**: 148
 Refractive index, **1**: 148, 171
 Celsit (alloy), **2**: 374
 Cement paper
 Density, **2**: 313
 Mica and, thermal conductivity, **2**: 314
 Thermal conductivity, **2**: 313
 Cement wood
 Density, **2**: 313
 Thermal conductivity, **2**: 313
 Cementite
 Curie constant, **6**: 380
 Curie point, **6**: 410
 Electrical conductivity, **6**: 182
 Kerr constant, **6**: 435
 Specific heat, **5**: 118
 Cements. See Dental cement, Hydraulic cement, Magnesia cement, Portland cement.
 Centigrade thermal unit, definition, **1**: 35
 Ceramic materials, **2**: 56, 64, 66, 82, 86, 87, 114, 117, 124
 X-ray diffraction data, **2**: 357
 Cerargyrite
 Boiling point, **1**: 123, 163
 Density, **1**: 123
 Refractive index, **1**: 123, 165
 See also Silver chloride.

- Cereal industry
 Air conditions for packing, **2**: 322
 Cereals, moisture content at various humidities, **2**: 324
 Cerebronic acid
 Optical rotatory power, **7**: 368
 Ceresin
 Density, **2**: 311
 Electrical conductivity, **2**: 310
 Melting point, **2**: 148
 Refractive index, **2**: 153
 Rubber softener, **2**: 278
 Ceric carbonate
 Magnetic susceptibility, **6**: 359
 Ceric molybdate
 Density, **1**: 139
 Melting point, **1**: 139
 Refractive index, **1**: 139, 168
 Ceric oxide
 Diffusion in tungsten, **6**: 56
 Electrical conductivity, **6**: 154
 Electrons, thermal emission of, **6**: 54
 Evaporation from tungsten, **6**: 56
 Heat of formation, **5**: 195
 Magnetic susceptibility, **6**: 359
 Specific heat, **5**: 98
 Thermionic work function, **6**: 54
 -Sulfuric acid
 Freezing point-solubility in water, **4**: 348
 Ceric sulfate, specific heat, **5**: 98
 Cerium
 Boiling point, **1**: 102
 Cathodoluminescence, **5**: 390
 Compressibility, **3**: 46, 48
 Density, **1**: 104; **2**: 456
 Electrical conductivity, **1**: 104; **6**: 153
 Electrode potential, **6**: 319
 Electrons, thermal emission of, **6**: 53
 Emission spectra, **5**: 286
 Hall effect, **6**: 416
 Hardness, **2**: 592
 Isotopes, **1**: 45
 Magnetic susceptibility, **6**: 354
 Melting point, **1**: 104
 Nernst effect, **6**: 420
 Persistent lines, **5**: 323
 Quantum numbers, **5**: 408
 Specific heat, **1**: 104; **5**: 92
 Thermionic work function, **6**: 53
 Thermochemistry, **5**: 195
 Thermoelectric properties, **6**: 214
 X-ray absorption limits, **6**: 39
 X-ray crystal structure, **1**: 340
 X-ray emission spectra, **6**: 39
 X-ray series, limiting frequencies, **6**: 35
 Zeeman effect, **5**: 420
 -Aluminum*
 -Carbon*-Bismuth-Iron
 -Carbon*-Chromium-Iron-Nickel
 -Carbon*-Iron
 -Carbon*-Iron-Nickel
 -Copper
 Equilibrium diagram, **2**: 430
 Hardness, **2**: 593
 -Iron
 Equilibrium diagram, **2**: 451
 Kerr constant, **6**: 435
 -Magnesium
 Equilibrium diagram, **2**: 430
 -Silicon
 Equilibrium diagram, **2**: 430
 -Tin
 Equilibrium diagram, **2**: 416
 Cerium chromium steels
 Endurance limits, **2**: 605
 Cerium chromium nickel steels
 Endurance limits, **2**: 605
 Cerium dichloride, electrical conductivity, aqueous solution, **6**: 233

- Cerium ethyl sulfate**
Density, 1: 139
Refractive index, 1: 139, 166
- Cerium nickel steels**
Endurance limits, 2: 605
Mechanical properties, 2: 531
- Cerium steels, 2: 374, 531, 605**
Endurance limits, 2: 605
Mechanical properties, 2: 531
- Cerotic acid, specific heat, 5: 105**
- Cerous acetate, solubility in water, 4: 227**
- Cerous bromide**
Magnetic susceptibility, 6: 359
Aqueous solution, 6: 364
- Cerous butyrate, solubility in water, 4: 227**
- Cerous carbonate**
Magnetic susceptibility, 6: 359
- Cerous chloride**
Ammines, decomposition pressure, 7: 290
Freezing point lowering of aqueous solution, 4: 257
Heat of formation, 5: 195
Magnetic susceptibility, 6: 359
Vapor pressure lowering in aqueous solution, 3: 295
-Ethyl alcohol
Boiling point elevation, 3: 337
- Cerous citrate**
Solubility in citric acid, 7: 339
- Cerous dithionate**
Density, 1: 138
Refractive index, 1: 138, 169
- Cerous fluoride**
-Calcium fluoride*
-Potassium fluoride
Freezing point-solubility, 4: 62
- Cerous formate, solubility in water, 4: 227**
- Cerous iodate**
Electrical conductivity, aqueous solution, 6: 258
Solubility in water, 4: 227
- Cerous isobutyrate**
Solubility in water, 4: 227
- Cerous malonate**
Solubility in aqueous solutions, 7: 339
- Cerous molybdate**
Refractive index, 7: 23
Specific heat, 5: 98
-Lead molybdate
Freezing point-solubility, 4: 53
- Cerous nitrate**
Absorption spectra, solutions, 5: 328
Dehydration behavior of hydrate, 7: 290
Verdet constant, aqueous solution, 6: 428
-Silver bromate
Solubility in water, 7: 322
- Cerous oxalate**
Dehydration behavior of hydrate, 7: 290
Electrical conductivity, aqueous solution, 6: 258
Solubility in aqueous solutions, 7: 339
-Sulfuric acid
Freezing point-solubility in water, 4: 335
- Cerous oxide, melting point, 4: 84**
- Cerous propionate**
Solubility in water, 4: 227
- Cerous selenate**
Density, 1: 138
Refractive index, 1: 138, 171
Solubility in water, 4: 227
- Cerous sulfate**
Decomposition pressure, 7: 290
Dehydration behavior of hydrate, 7: 290
Density, aqueous solution, 3: 71
Electrical conductivity, aqueous solution, 6: 236
Heat of formation, 5: 195
Magnetic susceptibility, 6: 359
Solubility in aqueous solutions, 7: 339
- Cerous sulfate.—(Continued)**
Solubility in water, 4: 227, 246
-Ammonium sulfate*
-Potassium sulfate
Freezing point-solubility in water, 4: 348
-Sodium sulfate
Freezing point-solubility in water, 4: 348
-Sulfuric acid
Freezing point-solubility in water, 4: 348
-Thallous sulfate
Freezing point-solubility in water, 4: 337
- Cerous tartrate**
Electrical conductivity, aqueous solution, 6: 258
Solubility in aqueous solutions, 7: 339
- Cerous tungstate**
-Lead tungstate
Freezing point-solubility, 4: 53
- Cerussite**
Compressibility, 3: 50
Density, 1: 116
Dielectric constant, 6: 100
Refractive index, 1: 116, 173
Solution velocity in acids, 5: 58
See also Lead carbonate.
- Cervantite**
Density, 1: 110
Refractive index, 1: 110, 165
- Cesium**
Absorption, index of, 5: 249
Absorption spectra, solutions, 5: 331
Boiling point, 1: 102; 3: 205
Compressibility, 3: 46
Critical potentials, 6: 70
Density
Liquid, 1: 102; 2: 457, 463
Solid, 1: 104; 2: 456
Electrical conductivity
Liquid, 1: 103
Solid, 1: 104; 6: 136, 137
Low temperature, 6: 127, 132
Electrons, thermal emission of, 6: 53
Emission, spectral, 5: 253
Emission spectra, 5: 290
Heat of fusion, 1: 104; 2: 458
Heat of vaporization, 1: 102
Isotopes, 1: 45
Magnetic susceptibility, 6: 354
Melting point, 1: 104
Persistent lines, 5: 323
Photoelectric sensitivity, wave length for maximum, 6: 68
Photoelectric threshold, 6: 68
Quantum numbers, 5: 408
Refraction, index of, 5: 249
Specific heat
Liquid, 1: 103; 5: 94
Solid, 1: 104; 5: 93
Spectral series, 5: 397
Thermal expansion
Liquid, 1: 102; 2: 463
Solid, 1: 104; 2: 460
Thermionic work function, 6: 53
Thermochemistry, 5: 207
Thermoelectric properties, 6: 214
Vapor pressure, 3: 205
Volume change on fusion, 2: 474
X-ray absorption limits, 6: 39
X-ray emission spectra, 6: 39
X-ray series, limiting frequencies, 6: 35
-Mercury
Equilibrium diagram, 2: 432
Surface tension, 2: 591
-Potassium
Photoelectric sensitivity, wave length for maximum, 6: 68
- Cesium.—(Continued)**
-Rubidium
Photoelectric sensitivity, wave length for maximum, 6: 68
-Sodium
Photoelectric sensitivity, wave length for maximum, 6: 68
-Sulfur
Freezing point-solubility, 4: 26
Cesium acetate, solubility in water, 4: 244
Cesium benzoate, solubility in water, 4: 244
Cesium bicarbonate
Decomposition pressure, 7: 311
Heat of decomposition, 7: 311
Heat of formation, 5: 207
Solubility in water, 4: 244
Cesium bromate
Density, aqueous solution, 3: 94, 107
Solubility in water, 4: 243
Cesium bromide
Compressibility, 3: 50
Density
Aqueous solution, 3: 94
Saturated, 3: 107
Liquid, 3: 24; 4: 446
Solid, 1: 160; 3: 44
Electrical conductivity, aqueous solution, 6: 235, 239
Heat of formation, 5: 207
Melting point, 1: 160
Refractive index, 1: 160, 165
Aqueous solution, 7: 76
Dispersion, 7: 102
Solubility in water, 4: 243
Specific heat, 5: 101
Aqueous solution, 5: 124
Surface tension, 4: 446
Transference number, 6: 311
Vapor pressure, 3: 214
X-ray diffraction data, 1: 346
Cesium bromodiiodide
Decomposition pressure, 7: 311
Heat of formation, 5: 207
Cesium carbonate
Decomposition pressure, 7: 311
Heat of formation, 5: 207
Magnetic susceptibility, 6: 360
Solubility in water, 4: 243
Cesium chlorate
Density, aqueous solution, 3: 94, 107
Solubility in water, 4: 243
-Sodium chlorate
Freezing point-solubility, 4: 68
Cesium chloride
Boiling point elevation in aqueous solution, 3: 326
Compressibility, 3: 50
Aqueous solution, 3: 440
Density
Aqueous solution, 3: 94, 107, 108; 4: 446
Liquid, 3: 24
Solid, 1: 160; 3: 43
Diffusion in water, 5: 69
Electrical conductivity, 6: 150
Aqueous solution, 6: 231, 234, 239
Freezing point lowering of aqueous solution, 4: 260
Heat of formation, 5: 207
Heat of transition, 5: 207
Magnetic susceptibility, 6: 360
Melting point, 1: 160
Refractive index, 1: 160, 165
Aqueous solution, 7: 76
Solubility in water, 4: 243
Specific heat, 5: 101
Aqueous solution, 5: 124
Surface tension, 4: 446
Transference number, 6: 309, 311
Transition temperature, 4: 8

* Data for system will be found under this compound in Index. Full explanation on page vii.

Cesium chloride.—(Continued)

- Vapor pressure, **3**: 214
 Aqueous solution, **3**: 374
 Vapor pressure lowering in aqueous solution, **3**: 299
 Viscosity, aqueous solution, **5**: 18
 X-ray diffraction data, **1**: 346
*-Acetone**
-Acetone-Mercuric chloride*
*-Bismuth chloride**
-Cobaltous chloride
 Freezing point-solubility in water, **4**: 309
-Cuprous chloride
 Freezing point-solubility, **4**: 57
-Ethyl alcohol
 Viscosity, aqueous solution, **5**: 24
-Ferric chloride
 Freezing point-solubility in water, **4**: 309
-Formamide
 Viscosity, **5**: 30
-Glycerol
 Viscosity, aqueous solution, **5**: 24
-Iodine-Nitrobenzene
 Freezing point-solubility, **4**: 269
-Lithium chloride
 Freezing point-solubility, **4**: 66
-Lithium chloride-Sodium chloride
 Freezing point-solubility, **4**: 75
-Mercuric chloride
 Freezing point-solubility, **4**: 56
-Methyl alcohol
 Viscosity, aqueous solution, **5**: 24
-Phthalic acid
 Density, aqueous solution, **3**: 103
 Freezing point-solubility in water, **4**: 420
-Potassium chloride
 Freezing point-solubility, **4**: 71
-Rubidium chloride
 Freezing point-solubility, **4**: 72
-Silver chloride
 Freezing point-solubility, **4**: 58
-Sodium chloride
 Freezing point-solubility, **4**: 68
-Thallium chloride
 Freezing point-solubility, **4**: 54
 Freezing point-solubility in water, **4**: 304
Cesium chloroaurate
 Solubility in water, **4**: 244
Cesium chlorodibromide
 Decomposition pressure, **7**: 310
 Heat of formation, **5**: 207
Cesium chromic selenate, decomposition pressure of hydrate, **7**: 311
Cesium chromic sulfate
 Decomposition pressure of hydrate, **7**: 311
 Density, **1**: 161
 Refractive index, **1**: 161, 165
 Solubility in water, **4**: 244
Cesium cobaltous selenate
 Refractive index, **7**: 31
Cesium cobaltous sulfate
 Decomposition pressure of hydrate, **7**: 311
 Density, **1**: 161
 Hydrate
 Decomposition pressure, **7**: 311
 Heat of decomposition, **7**: 311
 Refractive index, **1**: 161, 169; **7**: 31
 Solubility in water, **4**: 244
Cesium cupric chloride
 Heat of formation, **5**: 207
Cesium cupric selenate
 Refractive index, **7**: 31
Cesium cupric sulfate
 Density, **1**: 161
 Refractive index, **1**: 161, 169; **7**: 31
 Solubility in water, **4**: 244

- Cesium dibromiodide**
 Decomposition pressure, **7**: 311
 Heat of formation, **5**: 207
 X-ray diffraction data, **1**: 346
Cesium dichlorobromide
 Decomposition pressure, **7**: 310
 Heat of formation, **5**: 207
Cesium dichloriodide
 Decomposition pressure, **7**: 310
 Heat of formation, **5**: 207
 X-ray diffraction data, **1**: 346
Cesium dihydroxytartrate
 Solubility in water, **4**: 244
Cesium dithionate, refractive index, **7**: 29
Cesium ferric selenate
 Density, **1**: 161
 Refractive index, **1**: 161, 165
Cesium ferric sulfate
 Density, **1**: 161
 Refractive index, **1**: 161, 165
 Solubility in water, **4**: 244
Cesium ferrous selenate
 Refractive index, **7**: 31
Cesium ferrous sulfate
 Decomposition pressure of hydrate, **7**: 311
 Density, **1**: 161
 Refractive index, **1**: 161, 169; **7**: 31
 Solubility in water, **4**: 244
Cesium flames
 Electrical properties, **6**: 156
Cesium fluoride
 Density, liquid, **3**: 24; **4**: 446
 Heat of formation, **5**: 207
 Specific heat, **5**: 101
 Surface tension, **4**: 446
 Vapor pressure, **3**: 214
 X-ray diffraction data, **1**: 346
*-Aluminum fluoride**
*-Calcium chloride**
Cesium formate
 Density, aqueous solution, **3**: 95
 Solubility in water, **4**: 244
Cesium gallium selenate
 Solubility in water, **4**: 244
Cesium gallium sulfate
 Density, **1**: 161
 Refractive index, **1**: 161, 165
 Solubility in water, **4**: 244
-Ethyl alcohol
 Freezing point-solubility in water, **4**: 411
-Ethyl alcohol-Sulfuric acid
 Freezing point-solubility in water, **4**: 424
Cesium hydride, photoelectric sensitivity, wave-length for maximum, **6**: 68
Cesium hydrogen fluoride
 Heat of formation, **5**: 207
Cesium hydrogen sulfate
 Heat of formation, **5**: 207
Cesium hydroxide
 Absorption spectra, solutions, **5**: 327
 Dielectric constant, aqueous solution, **6**: 105
 Heat of formation, **5**: 207
 Heat of fusion, **5**: 131
 Heat of transition, **5**: 207
 Solubility in water, **4**: 243
 Transition temperature, **4**: 8
Cesium hydroxybenzoate (m-, p-)
 Solubility in water, **4**: 244
Cesium indium sulfate
 Density, **1**: 161
 Refractive index, **1**: 161, 165
 Solubility in water, **4**: 244
Cesium iodate
 Density, aqueous solution, **3**: 95, 107
Cesium iodide
 Absorption spectra, solutions, **5**: 331
 Compressibility, **3**: 50

Cesium iodide.—(Continued)

- Density
 Aqueous solution, **3**: 94, 107
 Liquid, **3**: 24; **4**: 446
 Solid, **1**: 160; **3**: 44
 Freezing point lowering of aqueous solution, **4**: 260
 Heat of dissociation, **5**: 418
 Heat of formation, **5**: 207
 Melting point, **1**: 160
 Refractive index, **1**: 160, 165
 Solubility in water, **4**: 243
 Specific heat, **5**: 101
 Surface tension, **4**: 446
 Transference number, **6**: 311
 Vapor pressure, **3**: 214
 X-ray diffraction data, **1**: 346
-Iodine
 Boiling point elevation, **3**: 325
 Freezing point-solubility in water, **4**: 267
-Iodine-o-Nitrotoluene
 Freezing point-solubility, **4**: 268, 269
Cesium magnesium chromate
 Density, **1**: 161
 Refractive index, **1**: 161, 171; **7**: 32
Cesium magnesium selenate
 Density, **1**: 161
 Refractive index, **1**: 161, 169; **7**: 32
Cesium magnesium sulfate
 Density, **1**: 161; **3**: 44
 Hydrate
 Decomposition pressure, **7**: 312
 Heat of decomposition, **7**: 312
 Refractive index, **1**: 161, 168; **7**: 31
 Solubility in water, **4**: 244
Cesium manganate
 Solubility in water, **4**: 244
Cesium manganic sulfate
 Decomposition pressure of hydrate, **7**: 311
 Refractive index, **1**: 161, 166; **7**: 31
Cesium manganous selenate
 Refractive index, **7**: 31
Cesium manganous sulfate
 Density, **1**: 161
 Hydrate
 Decomposition pressure, **7**: 311
 Heat of decomposition, **7**: 311
 Refractive index, **1**: 161, 169
 Solubility in water, **4**: 244
Cesium mercuric chloride
 Refractive index, **1**: 161, 165
Cesium nickel selenate
 Refractive index, **7**: 31
Cesium nickel sulfate
 Density, **1**: 161
 Hydrate
 Decomposition pressure, **7**: 312
 Heat of decomposition, **7**: 312
 Refractive index, **1**: 161, 169; **7**: 31
 Solubility in water, **4**: 244
Cesium nitrate
 Boiling point elevation in aqueous solution, **3**: 326
 Density
 Aqueous solution, **3**: 95, 107, 108
 Liquid, **3**: 24; **4**: 446
 Solid, **1**: 161; **3**: 44
 Electrical conductivity, **6**: 150
 Aqueous solution, **6**: 238
 Freezing point lowering of aqueous solution, **4**: 260
 Heat of formation, **5**: 207
 Heat of transition, **5**: 207
 Magnetic susceptibility, **6**: 360
 Melting point, **1**: 161
 Melting point under pressure, **4**: 13
 Refractive index, aqueous solution, **7**: 76
 Dispersion, **7**: 102
 Solubility in water, **4**: 243

* Data for system will be found under this compound in Index. Full explanation on page vii.

Cesium nitrate.—(Continued)

- Specific heat, aqueous solution, **5**: 124
 Surface tension, **4**: 446
 Transition temperature, **1**: 161; **3**: 44; **4**: 8
 Vapor pressure, aqueous solution, **3**: 374
 Viscosity, aqueous solution, **5**: 18
 Volume change on melting, **4**: 13
*-Acetone**
-Ethyl alcohol
 Viscosity, aqueous solution, **5**: 24
-Formamide
 Viscosity, **5**: 30
-Glycerol
 Viscosity, aqueous solution, **5**: 24
-Methyl alcohol
 Viscosity, aqueous solution, **5**: 24
Cesium oxalate, solubility in water, **4**: 243
Cesium oxalotellurate
 Solubility in water, **4**: 244
Cesium oxide, heat of formation, **5**: 207
Cesium perchlorate
 Density, aqueous solution, **3**: 107
 Refractive index, **7**: 29
 Solubility in water, **4**: 243
 Transition temperature, **4**: 8
*-Acetone**
*-Butyl alcohol**
-Ethyl alcohol
 Density, **3**: 142
 Freezing point-solubility in water, **4**: 411
-Isobutyl alcohol
 Density, **3**: 142
-Methyl alcohol
 Density, **3**: 142
-Propyl alcohol
 Density, **3**: 142
Cesium periodate
 Density, aqueous solution, **3**: 107
 Solubility in water, **4**: 243
Cesium peroxide, heat of formation, **5**: 207
Cesium rhodium sulfate
 Refractive index, **1**: 161, 165
Cesium salicylate
 Solubility in water, **4**: 244
Cesium selenate
 Density, aqueous solution, **3**: 95
 Refractive index, **1**: 161, 171; **7**: 29
 Solubility in water, **4**: 243
Cesium silicate, freezing point lowering of aqueous solution, **4**: 260
Cesium sulfate
 Boiling point elevation in aqueous solution, **3**: 326
 Density
 Aqueous solution, **3**: 95, 107, 108
 Liquid, **3**: 24; **4**: 446
 Solid, **1**: 161
 Freezing point lowering of aqueous solution, **4**: 260
 Heat of formation, **5**: 207
 Magnetic susceptibility, **6**: 360
 Melting point, **1**: 161
 Refractive index, **1**: 161, 170; **7**: 29
 Solubility in water, **4**: 243
 Surface tension, **4**: 446
 Transition temperature, **1**: 161; **4**: 8
 Vapor pressure, aqueous solution, **3**: 374
 Viscosity, aqueous solution, **5**: 18
 X-ray diffraction data, **1**: 346
*-Calcium sulfate**
-Sodium sulfate
 Freezing point-solubility in water, **4**: 355
Cesium sulfide, heat of formation, **5**: 207
Cesium tartrate
 Optical rotatory power, **7**: 354
Cesium tetranitrodiammine cobaltate
 Solubility in aqueous solutions, **7**: 347

- Cesium tetrasulfoniodide**
 Decomposition pressure, **7**: 310
 Heat of decomposition, **7**: 310
 Heat of formation, **5**: 207
Cesium tetrathiocyanatodiammine chromate
 Solubility in aqueous solutions, **7**: 347
Cesium thallium chloride
 Heat of formation, **5**: 207
Cesium thiocyanate
 Sulfur dioxide complex
 Decomposition pressure, **7**: 311
 Heat of decomposition, **7**: 311
Cesium titanium sulfate, decomposition pressure of hydrate, **7**: 311
Cesium tribromide
 Decomposition pressure, **7**: 310
 Heat of formation, **5**: 207
Cesium triiodide
 Decomposition pressure, **7**: 311
 Heat of formation, **5**: 207
 X-ray diffraction data, **1**: 346
Cesium vanadium sulfate
 Decomposition pressure of hydrate, **7**: 311
 Solubility in water, **4**: 244
Cesium zinc selenate
 Density, **1**: 161
 Refractive index, **1**: 161, 170; **7**: 31
Cesium zinc sulfate
 Decomposition pressure of hydrate, **7**: 311
 Density, **1**: 161; **3**: 44
 Refractive index, **1**: 161, 169; **7**: 31
 Solubility in water, **4**: 244
Cetene
-Sulfur dioxide
 Solubility, mutual, **3**: 394
Cetyl acetate
 Verdet constant, **6**: 431
Cetyl alcohol
 Absorption spectra, **5**: 352
 Cryoscopic constant, **4**: 184
 Diffusion in ethyl alcohol, **5**: 74
 Electrical conductivity, **6**: 145
 Heat of combustion, **5**: 164
 Heat of fusion, **5**: 134
 Viscosity, **7**: 222
-Chloroacetic acid
 Freezing point-solubility, **4**: 106, 107
-Cholesterol
 Freezing point-solubility, **4**: 165
-Diphenylamine
 Freezing point-solubility, **4**: 161
-Sulfur dioxide
 Freezing point-solubility, **4**: 188
Cetyl iodide, dielectric constant, **6**: 96
Cetyl palmitate
*-Benzene**
-Cyclohexane
 Boiling point elevation, **3**: 346
-Naphthalene
 Freezing point-solubility, **4**: 156
Cetylmaleonic acid
 Heat of combustion, **5**: 166
Ceyssatite. *See* Diatomaceous earth.
Chabazite
 Dehydration behavior, **7**: 312, 313
 Thermal conductivity, **5**: 231
Chalcantite
 Density, **1**: 122
 Refractive index, **1**: 122, 170; **7**: 21
Chalcedony, dielectric constant, **6**: 99
Chalcocite. *See* Cuprous sulfide.
Chalcocementite
 Density, **1**: 122
 Refractive index, **1**: 122, 172
Chalcophyllite
 Density, **1**: 123
 Refractive index, **1**: 123, 167

- Chalcopyrite**
 Compressibility, **3**: 50
 Density, **1**: 129
 Magnetic susceptibility, **6**: 364
 Specific heat, **5**: 98
 Thermal expansion, **3**: 44
Chalcosiderite
 Density, **1**: 129
 Refractive index, **1**: 129, 173
Chalcostibite, density, **1**: 123
Chalk
 Thermal conductivity, **2**: 315; **5**: 217
Chamet bronze, **2**: 374; *cf.* 555, 601
Charcoal
 Blood, adsorption of gases by, **3**: 251
 Bone, adsorption of gases by, **3**: 251
 Composition, **2**: 134
 Density, **2**: 313
 Fuel value, **2**: 130
 Gases, absorption of, by, **3**: 250
 Heat of adsorption of gases on, **5**: 139
 Heat of wetting, **5**: 142, 143
 Liquids, adsorption of, by, **3**: 251
 Specific surface, **3**: 250
 Thermal conductivity, **2**: 313
 Wood, adsorption of gases, by, **3**: 250
Charpy phosphor bronze, **2**: 374; *cf.* 560
Chaulmoogric acid
 Optical rotatory power, **7**: 416
Checo (alloy), **2**: 374
Cheddites (explosives), **7**: 494
Chemical kinetics, **7**: 113
Chemiluminescence, **5**: 386, 389
 Efficiency of, **5**: 390
Chenevixite
 Density, **1**: 129
 Refractive index, **1**: 129, 167
Chert
 Bulk density, **2**: 53
 Hardness, **2**: 50
 Impact hardness, **2**: 51
Cheval-vapeur, definition, **1**: 35
Childrenite
 Density, **1**: 137
 Refractive index, **1**: 137, 172
Chile, weights and measures, **1**: 4
China, weights and measures, **1**: 4
China clay, rubber, effect on, **2**: 287
Chinese bronze, **2**: 374; *cf.* 561
Chinese silver, **2**: 374
Chinese speculum, **2**: 374
Chinotoxine, absorption spectra, ultra-violet, **5**: 370, 379
Chiolite
 Density, **1**: 153
 Refractive index, **1**: 153, 166
Chitic acid, optical rotatory power, **7**: 397
Chitin, optical rotatory power, **7**: 477
Chitonic acid, optical rotatory power, **7**: 397
Chiviatite, density, **1**: 116
Chloral
 Absorption spectra, **5**: 335, 365, 371
 Density, aqueous solution, **3**: 113
 Dielectric constant, **6**: 84
 Diffusion in ethyl alcohol, **5**: 73
 Heat of vaporization, **5**: 136
 Magnetic susceptibility, **6**: 361
 Refractive index, **7**: 34
 Solubility in water, **3**: 387
 Specific heat, **5**: 107
 Surface tension, **4**: 448
 Viscosity
 Aqueous solution, **5**: 22
 Liquid, **5**: 35; **7**: 213
*-tert.-Amyl alcohol**
-Dimethylethyl carbinol
 Density, **3**: 152
-Ethyl alcohol
 Density, **3**: 152
 Freezing point-solubility, **4**: 101

Chloral**-Ethyl alcohol.—(Continued)**Vapor pressure, **3**: 360Viscosity, **5**: 35**-Methyl alcohol**Vapor pressure, **3**: 360**Chloral alcoholate**Cryoscopic constant, **4**: 183Freezing point lowering of aqueous solution, **4**: 262Heat of fusion, **5**: 132Heat of solution in water, **5**: 149Specific heat, **5**: 102**-Acetone*****-Carbon disulfide*****-Ethyl bromide**Boiling point elevation, **3**: 335**-Ethyl ether**Boiling point elevation, **3**: 341**-Methyl iodide**Boiling point elevation, **3**: 333**Chloral ammonia****-Ethyl ether**Boiling point elevation, **3**: 341**Chloral hydrate**Absorption spectra, **5**: 331, 335, 371Azeotropic mixtures, **3**: 319Boiling point, **3**: 334Crystallography, **1**: 324Decomposition, kinetics of, **7**: 123Density, **3**: 45Aqueous solution, **3**: 112, 113Dielectric absorption, **6**: 84Dielectric constant, **6**: 84Aqueous solution, **6**: 100Diffusion in methyl alcohol, **5**: 72Diffusion in water, **5**: 69Electrical conductivity, aqueous solution, **6**: 262Freezing point lowering of aqueous solution, **4**: 262Heat of fusion, **5**: 132Heat of solution in water, **5**: 148Heat of vaporization, **5**: 136Solubility in water, **4**: 251

Specific heat

Liquid, **5**: 107Solid, **5**: 102**-Acetone*****-Antipyrine*****-Benzene*****-Chloroform**Density, **3**: 146Freezing point-solubility, **4**: 99Heat of solution, **5**: 151**-Ethyl alcohol**Density, **3**: 154Dielectric constant, **6**: 102Freezing point-solubility, **4**: 107Heat of solution, **5**: 152**-Ethyl ether**Boiling point elevation, **3**: 341Distribution coefficients in water, **3**: 423Heat of solution, **5**: 152**-Glucose**Boiling point elevation, **3**: 334**-Hydroquinol**Boiling point elevation, **3**: 334**-Menthol**Freezing point-solubility, **4**: 107**-Naphthalene**Boiling point elevation, **3**: 334**-Phenyl salicylate**Freezing point-solubility, **4**: 107**-Potassium sulfate**Freezing point-solubility in water, **4**: 402**-Thymol**Boiling point elevation, **3**: 334**Chloral hydrate.—(Continued)****-Toluene**Density, **3**: 154Dielectric constant, **6**: 102Distribution coefficients in water, **3**: 423Freezing point-solubility, **4**: 107Heat of solution, **5**: 152**Chloranil**, magnetic susceptibility, **6**: 362**Chlorate ion**, free energy, **7**: 233**Chloric acid**Decomposition, kinetics of, **7**: 149Density, aqueous solution, **3**: 54Electrical conductivity, aqueous solution, **6**: 241, 242Free energy of aqueous solution, **7**: 234Heat of formation, **5**: 177Refractive index, aqueous solution, **7**: 65Specific heat, aqueous solution, **5**: 122Viscosity, aqueous solution, **5**: 12**Chlorine**Band spectra, **5**: 412Boiling point, **1**: 102; **3**: 324Compressibility, liquid, **3**: 35Concentration cells, **6**: 322Critical constants, **1**: 102; **3**: 202, 248Critical potentials, **6**: 70, 72Decomposition pressure of hydrate, **7**: 233

Density

Gas, **1**: 102; **3**: 3Liquid, **1**: 102; **3**: 20Solid, **1**: 104

Dielectric constant

Gas, **6**: 79Liquid, **6**: 75Diffusion in water, **5**: 63Dispersion formula, **7**: 11Dissociation, work of, **6**: 72Dissymmetry in emission of electrons freed by X-rays, **6**: 5Electrical conductivity, **1**: 103; **6**: 142Electrode potential, **7**: 233Electrons, absorption of, by, **6**: 61Electrons, attachment of, to form ions, **6**: 116Emission spectra, **5**: 287

Free energy

Dissociation, **7**: 232Hydrolysis, **7**: 233, 234In carbon tetrachloride, **7**: 233In water, **7**: 233Ion, **7**: 232Liquid, **7**: 233Reaction with carbon monoxide, **7**: 244Reaction with nitric oxide, **7**: 240Reaction with sulfur dioxide, **7**: 237Reaction with water, **7**: 233Solution, **7**: 233Vaporization, **7**: 233Freezing point lowering of aqueous solution, **4**: 254, 261Heat of adsorption on charcoal, **5**: 140Heat of dissociation, **5**: 418Heat of evaporation, **1**: 102Heat of fusion, **1**: 104; **5**: 131Hydrolysis constant, **7**: 234Ionization, atomic, **6**: 122Ions, mobility of, in, **6**: 111Isotopes, **1**: 45Magnetic susceptibility, **6**: 354Melting point, **1**: 104Orthobaric density, **3**: 202Overvoltage, **6**: 339Persistent lines, **5**: 323Photoelectric threshold, **6**: 68Quantum numbers, **5**: 408**Chlorine.—(Continued)**

Refractive index

Gas, **7**: 6Liquid, **1**: 103; **7**: 11Solubility in aqueous solutions, **3**: 273Solubility in organic liquids, **3**: 261Solubility in water, **3**: 256Sound, velocity of, in, **6**: 462

Specific heat

Gas, **1**: 102; **5**: 80; **7**: 232Liquid, **1**: 103; **5**: 85Solid, **1**: 104; **5**: 85Spectral filter, use as, **5**: 273Spectral series, **5**: 397Surface tension, **1**: 103; **4**: 441, 442, 447Thermal conductivity, **5**: 213

Thermal expansion

Gas, **3**: 16Liquid, **1**: 102; **3**: 20Thermochemistry, **5**: 176Toxicology, **2**: 319Transmission of radiant energy, **5**: 269Vapor pressure, **3**: 201, 202

Viscosity

Gas, **1**: 102; **5**: 2Liquid, **7**: 212X-ray absorption limits, **6**: 36, 45X-ray emission spectra, **6**: 36X-ray series, limiting frequencies, **6**: 35X-rays, absorption coefficient, **6**: 13, 16Zeeman effect, **5**: 420**-Acetone*****-Antimony pentachloride*****-Arsenous chloride*****-Bismuth*****-Bromine*****-Carbon dioxide*****-Carbon tetrachloride*****-Chloroform**Density, **3**: 131Freezing point lowering, **4**: 36**-Ethyl acetate**Freezing point lowering, **4**: 36Freezing point-solubility, **4**: 32**-Ethyl alcohol**Freezing point lowering, **4**: 36**-Ethyl ether**Freezing point lowering, **4**: 36Freezing point-solubility, **4**: 32**-Hexachloroethane**Boiling point elevation, **3**: 325**-Hydrogen**Ignition temperature, **2**: 173Ions, mobility of, in, **6**: 112Photochemical reaction, **7**: 164Quantum sensitivity, **7**: 168**-Hydrogen chloride**Freezing point-solubility, **4**: 30**-Iodine**Freezing point-solubility, **4**: 23Vapor pressure, **3**: 353**-Methyl alcohol**Freezing point lowering, **4**: 36**-Nitrosyl chloride**Freezing point-solubility, **4**: 30**-Oxygen**Ions, mobility of, in, **6**: 112**-Phosgene**Vapor pressure, **3**: 353**-Phosphorus trichloride**Equilibrium constant, **7**: 242**-Silicon tetrachloride**Freezing point-solubility, **4**: 30**-Stannic chloride**Freezing point lowering, **4**: 36Freezing point-solubility, **4**: 30**-Sulfur**Boiling point elevation, **3**: 324Freezing point-solubility, **4**: 23

* Data for system will be found under this compound in Index. Full explanation on page vii.

Chlorine.—(Continued)

- Sulfur dichloride
 - Boiling point elevation, **3**: 324
- Sulfur dioxide
 - Freezing point-solubility, **4**: 30
- Sulfur dioxide-Sulfuryl chloride
 - Freezing point-solubility, **4**: 268
- Sulfur monochloride
 - Boiling point elevation, **3**: 325
- Tellurium
 - Freezing point-solubility, **4**: 23
- Titanium tetrachloride
 - Freezing point-solubility, **4**: 30
- Toluene
 - Freezing point lowering, **4**: 36
 - Freezing point-solubility, **4**: 32
- Water
 - Freezing point-solubility, **4**: 30

Chlorine dioxide

- Detonation, **2**: 185
- Freezing point lowering of aqueous solution, **4**: 254
- Heat of formation, **5**: 176
- Hydrolysis, **7**: 149
- Photochemical decomposition, **7**: 168
- Vapor pressure, **3**: 213
- Carbon tetrachloride*

Chlorine monoxide

- Density, gas, **3**: 3
- Heat of formation, **5**: 176
- Photochemical decomposition, **7**: 164
- Quantum sensitivity, **7**: 168

Chloroacenaphthene

- Absorption spectra, **5**: 348
- Acenaphthene*
- Bromoacenaphthene*
- Iodoacenaphthene
- Freezing point-solubility, **4**: 180

Chloroacetal

- Diffusion in methyl alcohol, **5**: 73

Chloroacetaldehyde

- Heat of combustion, **5**: 168

Chloroacetamide

- Boiling point elevation in aqueous solution, **3**: 327
- Electrical conductivity, aqueous solution, **6**: 262

- Acetone*
- Benzene*
- Chloroform
 - Boiling point elevation, **3**: 331
- Ethyl alcohol
 - Boiling point elevation, **3**: 336

***o*-Chloroacetanilide**

- Solubility in water, **4**: 252
- Benzene*
- 4-Chloroacetanilide
 - Freezing point-solubility, **4**: 153

***m*-Chloroacetanilide**

- Solubility in water, **4**: 252
- Benzene*

***p*-Chloroacetanilide**

- Absorption spectra, **5**: 343
- Solubility in water, **4**: 251, 252
- Benzene*
- 2-Chloroacetanilide*
- 2, 4-Dichloroacetanilide
 - Freezing point-solubility, **4**: 153
- Ethyl alcohol
 - Density, **3**: 160

Chloroacetanilides

- Vapor pressure, **3**: 224

Chloroacetic acid

- Absorption spectra, **5**: 331, 335
- Activity coefficient, **7**: 245
- Azeotropic mixtures, **3**: 319
- Boiling point elevation in aqueous solution, **3**: 327
- Compressibility, aqueous solution, **3**: 440
- Cryoscopic constant, **4**: 183, 215

Chloroacetic acid.—(Continued)

- Crystallization velocity, **5**: 61
- Density, aqueous solution, **3**: 112
- Dielectric constant, **6**: 84
- Diffusion in benzene, **5**: 74
- Diffusion in methyl alcohol, **5**: 72
- Electrical conductivity, **6**: 143
- Aqueous solution, **6**: 262
- Esterification constant, **7**: 138
- Free energy of ionization, **7**: 245
- Heat of combustion, **5**: 168
- Heat of fusion, **5**: 132
- Heat of solution in water, **5**: 148
- Ionization constant, **7**: 245
- Melting point under pressure, **4**: 14
- Photochemical hydrolysis, **7**: 163, 169
- Specific heat, **5**: 102
- Aqueous solution, **5**: 124
- Surface tension, **4**: 448
- Aqueous solution, **4**: 467
- Transition velocity, **5**: 61
- Verdet constant, **6**: 428
- Viscosity, aqueous solution, **5**: 20
- Volume change on melting, **4**: 14
- Acetic acid*
- Acetone*
- Acetophenone*
- Ammonium chloroacetate*
- Ammonium trichloroacetate*
- Benzene*
- Benzil*
- Benzoic acid*
- Bromoform*
- Calcium chloride*-Potassium oxalate
- Calcium chloride*-Potassium tartrate
- Calcium oxalate*-Potassium chloride
- Camphor*
- Carbon disulfide*
- Carbon tetrachloride*
- Cetyl alcohol*
- Chloroform
 - Distribution coefficients in water, **3**: 423
- Cinnamic acid
 - Freezing point-solubility, **4**: 173
- Cresol (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 173
- Crotonic acid
 - Freezing point-solubility, **4**: 173
- Dibenzalacetone
 - Freezing point-solubility, **4**: 106
- Dichloroacetic acid
 - Freezing point-solubility, **4**: 105
- Dimethyl oxalate
 - Freezing point solubility, **4**: 105
- Dimethyl succinate
 - Freezing point-solubility, **4**: 106
- Dimethylpyrone
 - Freezing point-solubility, **4**: 106
- Ethyl alcohol
 - Photochemical reaction, **7**: 164
- Ethyl ether
 - Boiling point elevation, **3**: 341
 - Distribution coefficients in water, **3**: 423
- Guaiacol
 - Freezing point-solubility, **4**: 106
- Methyl cinnamate
 - Freezing point-solubility, **4**: 106
- Naphthalene
 - Freezing point-solubility, **4**: 106
- Naphthol (α -, β -)
 - Freezing point-solubility, **4**: 106, 107
- Phenol
 - Freezing point-solubility, **4**: 173
- Phenyl salicylate
 - Freezing point-solubility, **4**: 173
- Phenylacetic acid
 - Freezing point-solubility, **4**: 173
- Piperonal
 - Freezing point-solubility, **4**: 106

Chloroacetic acid.—(Continued)

- Potassium chloroacetate
 - Density, aqueous solution, **3**: 103
 - Potassium trichloroacetate
 - Density, aqueous solution, **3**: 103
 - Silver benzoate
 - Solubility in water, **7**: 324
 - Silver nitrate
 - Freezing point-solubility in water, **4**: 360
 - Sodium chloroacetate
 - Density, aqueous solution, **3**: 103
 - Sodium trichloroacetate
 - Density, aqueous solution, **3**: 103
 - Sulfuric acid
 - Freezing point-solubility, **4**: 188
 - Thymol
 - Freezing point-solubility, **4**: 106, 107
 - Toluene
 - Density, **3**: 154
 - Distribution coefficients in water, **3**: 423
 - Toluic acid (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 173
 - Trichloroacetic acid
 - Freezing point-solubility, **4**: 101
 - Vanillin
 - Freezing point-solubility, **4**: 106
- Chloroacetone**
- Absorption spectra, **5**: 336
 - Dielectric constant, **6**: 85
 - Magnetic susceptibility, **6**: 361
 - Surface tension, **4**: 436, 449
- m*-Chloroacetophenone**
- Birefringence, electric, **7**: 111
- ω -Chloroacetophenone**
- Verdet constant, **6**: 429
- α -Chloroalocinnamic acid**
- Ethyl alcohol
 - Density, **7**: 81
 - Refractive index, **7**: 81
 - Dispersion, **7**: 103
- Chloroanilic acid**
- Electrical conductivity, aqueous solution, **6**: 271
 - Heat of combustion, **5**: 169
- Chloroaniline**
- Absorption spectra, **5**: 339
 - Diffusion in benzene, **5**: 74
 - Diffusion in methyl alcohol, **5**: 73
 - Isoamyl acetate
 - Viscosity, **5**: 47
- o*-Chloroaniline**
- Boiling point, **3**: 221
 - Heat of solution in water, **5**: 149
 - Surface tension, **4**: 454
 - Vapor pressure, **3**: 221
 - Viscosity, **7**: 217
 - Benzene*
 - Isoamyl acetate
 - Density, **3**: 182
- m*-Chloroaniline**
- Boiling point, **3**: 221
 - Dielectric constant, **6**: 90
 - Electrical conductivity, **6**: 144
 - Heat of solution in water, **5**: 149
 - Refractive index, **7**: 38
 - Vapor pressure, **3**: 221
 - Verdet constant, **6**: 429
 - Viscosity, **5**: 28; **7**: 217
 - Benzene*
 - Isoamyl acetate
 - Density, **3**: 182
 - Silver nitrate
 - Density, **3**: 139
 - Viscosity, **5**: 28
- p*-Chloroaniline**
- Heat of fusion, **5**: 133
 - Heat of solution in water, **5**: 149
 - Surface tension, **4**: 454
 - Vapor pressure, **3**: 221

p-Chloroaniline.—(Continued)Verdet constant, **6**: 429Viscosity, **7**: 217

-Benzene*

-Ethyl alcohol

Density, **3**: 160

-Isoamyl acetate

Density, **3**: 182**Chloroaniline hydrochloride** (*o*-, *m*-, *p*-)Heat of solution in water, **5**: 149 **α -Chloroanthracene**

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107 **β -Chloroanthracene**

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107**9-Chloroanthracene**

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107**Chloroapatite**Density, **1**: 143Melting point, **1**: 143Refractive index, **1**: 143, 167**Chloroauric acid**Heat of formation, **5**: 189**Chlorobenzaldehyde** (*o*-, *m*-, *p*-)Absorption spectra, **5**: 340Refractive index, **7**: 40***o*-Chlorobenzanilide**-*p*-ChlorobenzanilideFreezing point-solubility, **4**: 162**Chlorobenzene**Absorption spectra, **5**: 332, 338Azeotropic mixtures, **3**: 319, 321Birefringence, **7**: 111, 113Boiling point, **3**: 220, 343Compressibility, **3**: 36, 39Condensation on ions and nuclei, **6**: 117Critical point data, **3**: 245, 248Density, **3**: 29, 33Dielectric constant, **6**: 89Diffusion in benzene, **5**: 74Diffusion in methyl alcohol, **5**: 72Flash point, **2**: 161Heat of vaporization, **5**: 137Magnetic susceptibility, **6**: 362Melting point, **1**: 54Melting point under pressure, **4**: 15Orthobaric density, **3**: 245

Polarization of light scattered by

Gas, **5**: 266Liquid, **5**: 267Refractive index, **7**: 38Solidification point, **1**: 62Sound, velocity of, in, **6**: 464Specific heat, **5**: 110Surface tension, **4**: 436, 453Thermal conductivity, **5**: 228Vapor pressure, **3**: 220Vapor pressure above 1 atm., **3**: 245Verdet constant, **6**: 429Viscosity, **5**: 39, 43; **7**: 217, 223Volume change on melting, **4**: 15

-Acenaphthene*

-Acetic acid*

-Acetone*

-Anthracene*

-Antimony tribromide*

-Antimony trichloride*

-Benzene*

-Benzene*-Ethyl propionate-Toluene

-Benzene*-Toluene

-Benzil*

-Benzoyl chloride*

-Bromobenzene*

Chlorobenzene.—(Continued)

-Camphor*

-Carbazole*

-Carbon disulfide*

-Carbon tetrachloride*

-Chloroform

Heat of solution, **5**: 155

-Cyanobenzene

Freezing point-solubility, **4**: 128-*p*-DichlorobenzeneDensity, **3**: 173

-Diethyl tartrate

Density, **3**: 174

-Ethyl alcohol

Density, **3**: 159

-Ethyl amyl ether

Density, **3**: 174Dielectric constant, **6**: 103

-Ethyl propionate

Surface tension, **4**: 473

-Ethylene bromide

Density, **3**: 155Heat of solution, **5**: 156Surface tension, **4**: 471

-Fluorene

Freezing point-solubility, **4**: 176

-Fluorobenzene

Freezing point-solubility, **4**: 128

-Formic acid

Solubility, mutual, **3**: 397

-Heptane

Density, **3**: 174Dielectric constant, **6**: 103

-Iodine

Density, **3**: 132

-Iodobenzene

Freezing point-solubility, **4**: 128

-Methyl butyrate

Surface tension, **4**: 473

-Naphthalene

Density, **3**: 175Freezing point-solubility, **4**: 176-Naphthylamine (α -, β -)Freezing point-solubility, **4**: 128

-Phenanthrene

Freezing point-solubility, **4**: 176

-Phenol

Density, **3**: 174Viscosity, **5**: 43

-Phosphorus

Solubility, mutual, **3**: 394

-Sulfur

Solubility, mutual, **3**: 394Pressure, effect of, **3**: 394

-Toluene

Density, **3**: 174Surface tension, **4**: 473Viscosity, **5**: 43-*m*-XyleneDensity, **3**: 174Dielectric constant, **6**: 103-*p*-XyleneHeat of solution, **5**: 157***o*-Chlorobenzoic acid**Absorption spectra, **5**: 340

Electrical conductivity, aqueous solu-

tion, **6**: 278Heat of fusion, **5**: 133Heat of solution in water, **5**: 150Solubility in water, **3**: 390

Specific heat

Liquid, **5**: 110Solid, **5**: 103

-Benzene*

-Benzoic acid*

-Chlorobenzoic acid (*m*-, *p*-)Freezing point-solubility, **4**: 169, 178

-Chloroform

Distribution coefficients in water,
3: 429***o*-Chlorobenzoic acid.**—(Continued)

-Ethyl ether

Distribution coefficients in water,
3: 429

-Heptane

Freezing point-solubility, **4**: 145

-Xylene

Distribution coefficients in water,
3: 429***m*-Chlorobenzoic acid**Absorption spectra, **5**: 340

Boiling point elevation in aqueous

solution, **3**: 327

Electrical conductivity, aqueous solu-

tion, **6**: 278Heat of fusion, **5**: 133Solubility in water, **3**: 390

Specific heat

Liquid, **5**: 110Solid, **5**: 103

-Benzene*

-Benzoic acid*

-*o*-Chlorobenzoic acid**p*-Chlorobenzoic acidFreezing point-solubility, **4**: 178

-2, 5-Dichlorobenzoic acid

Freezing point-solubility, **4**: 144

-Heptane

Freezing point-solubility, **4**: 145***p*-Chlorobenzoic acid**Absorption spectra, **5**: 340

Electrical conductivity, aqueous solu-

tion, **6**: 278Heat of fusion, **5**: 133

Specific heat

Liquid, **5**: 110Solid, **5**: 103

-Benzene*

-Benzoic acid*

-Chlorobenzoic acid (*o*-, *m*-)*

-Heptane

Freezing point-solubility, **4**: 145

-Potassium hydroxide

Photochemical reaction, **7**: 164**Chlorobenzoic acids**Diffusion in methyl alcohol, **5**: 73

Vapor pressure

Liquid, **3**: 222Solid, **3**: 209**Chlorobenzoyl chlorides**Vapor pressure, **3**: 222***o*-Chlorobenzyl chloride**-*p*-Chlorobenzyl chlorideFreezing point-solubility, **4**: 147***p*-Chlorobromobenzene**Absorption spectra, **5**: 338Surface tension, **4**: 453**Chlorobromofluoroacetic acid**

Electrical conductivity, aqueous solu-

tion, **6**: 261**Chlorobromomethane**Diffusion in methyl alcohol, **5**: 72 **α -Chlorobutyric acid**, electrical conductiv-ity, aqueous solution, **6**: 267 **β -Chlorobutyric acid**

Electrical conductivity, aqueous solu-

tion, **6**: 267Optical rotatory power, **7**: 365Refractive index, **7**: 36 **γ -Chlorobutyric acid**, electrical conductiv-ity, aqueous solution, **6**: 267**Chlorocalcite**Melting point, **1**: 158Refractive index, **1**: 158, 169**Chlorocamphor**Absorption spectra, **5**: 346Optical rotatory power, **7**: 438Verdet constant, **6**: 430

* Data for system will be found under this compound in Index. Full explanation on page vii.

α -Chlorocinnamic acid
 -Ethyl alcohol
 Density, **7**: 81
 Refractive index, **7**: 81
 Dispersion, **7**: 103
 α -Chlorocinnamic aldehyde
 - α -Bromocinnamic aldehyde*
 α -Chlorocrotonic acid
 Electrical conductivity, aqueous solution, **6**: 266
 -Dimethylpyrone
 Freezing point-solubility, **4**: 113
 -Sulfuric acid
 Freezing point-solubility, **4**: 188
Chlorodibromoacetic acid, electrical conductivity, aqueous solution, **6**: 261
2-Chloro-4, 6-dibromoaniline
 -2, 4, 6-Tribromoaniline
 Freezing point-solubility, **4**: 123
Chlorodifluoroacetic acid, electrical conductivity, aqueous solution, **6**: 261
1-Chloro-2, 3-dihydroxypropane
 Magnetic susceptibility, **6**: 361
3-Chloro-1, 2-dihydroxypropane
 Dielectric constant, **6**: 86
 Diffusion in water, **5**: 70
1-Chloro-2, 4-dinitrobenzene
 Crystallography, **1**: 325
 -*p*-Aminoacetophenone*
Chloroethyl acetate
 Flash point, **2**: 161
 Heat of vaporization, **5**: 137
2-Chloroethyl alcohol
 Heat of vaporization, **5**: 137
 β -Chloroethylbenzene, viscosity, **7**: 219
Chloroform
 Absorption spectra, **5**: 331, 334
 Angle of contact, **4**: 434
 Azeotropic mixtures, **3**: 318, 323
 Birefringence, **7**: 110
 Boiling point, **3**: 215, 331
 Compressibility, **3**: 35, 39
 Condensation on ions and nuclei, **6**: 117
 Critical point data, **3**: 245, 248
 Critical potentials, **6**: 72
 Cryoscopic constant, **4**: 183
 Density
 Aqueous solution, **3**: 113
 Liquid, **3**: 28, 33
 Dielectric constant, **6**: 82, 83, 105
 Diffusion in benzene, **5**: 74
 Diffusion in ethyl alcohol, **5**: 73
 Diffusion in methyl alcohol, **5**: 72
 Electrical conductivity, **6**: 143
 Faraday effect, lag in, **6**: 434
 Heat of adsorption on charcoal, **5**: 140
 Heat of combustion, **5**: 168
 Heat of solution in water, **5**: 148
 Heat of vaporization, **5**: 136, 138
 Heat of wetting by, **5**: 142
 Interfacial tension against various solutions, **4**: 437
 Internal pressure, **4**: 19
 Ionization by α -particles, **6**: 122
 Ionization by β -particles, **6**: 121
 Ionization by γ -rays, **6**: 123
 Ionization by X-rays, **6**: 123
 Ions, mobility of, in, **6**: 112
 Magnetic susceptibility, **6**: 361
 Melting point, **1**: 54
 Melting point under pressure, **4**: 14
 Polarization of light scattered by
 Gas, **5**: 265
 Liquid, **5**: 266
 Refractive index
 Gas, **7**: 10
 Liquid, **7**: 12, 34, 78
 Solidification point, **1**: 62
 Solubility in water, **3**: 387
 Solubility of salts in, **4**: 206

Chloroform.—(Continued)
 Sound, velocity of
 Gas, **6**: 462, 463
 Liquid, **6**: 464
 Specific heat
 Gas, **5**: 80, 81
 Liquid, **5**: 107
 Surface tension, **4**: 436, 448
 Pressure, effect of, **4**: 475
 Thermal conductivity
 Gas, **5**: 214, 215
 Liquid, **5**: 228
 Toxicology, **2**: 319
 Vapor pressure, **3**: 215
 Vapor pressure above 1 atm., **3**: 245
 Verdet constant, **6**: 427
 Viscosity
 Gas, **5**: 3
 Liquid, **5**: 11, 26, 32
 Volume change on melting, **4**: 14
 -Acenaphthene*
 -Acetaldehyde*
 -Acetamide*
 -Acetanilide*
 -Acetanilide*-Ethyl ether
 -Acetic acid*
 -Acetone*
 -Acetone*-Benzene
 -Acetophenone*
 -*o*-Acetotoluide*
 -*p*-Acetoxyacetanilide*
 -Air*
 -Allylbenzylmethylphenylammonium iodide*
 -Allylethylmethyltolylammonium iodide*
 -Aluminum chloride*
 -*o*-Aminobenzoic acid*
 -Ammonia*
 -Amyl alcohol*
 -Amylamine*
 -Amylammonium chloride*
 -Amylene*
 -Anethole*
 -Aniline*
 -Aniline salicylate*
 -Anthracene*
 -Anthracene*-Tetrapropylammonium iodide
 -Anthraquinone*
 -Antimony pentachloride*
 -Antimony tribromide*
 -Antimony trichloride*
 -Antipyrine*
 -Atropine*
 -Azobenzene*
 -Benzamide*
 -Benzanilide*
 -Benzene*
 -Benzene*-Iodine
 -Benzil*
 -Benzil*-Camphor
 -Benzil*-Naphthalene
 -Benzil*-Triphenylmethane
 -Benzilic acid*
 -Benzoic acid*
 -Benzylamine*
 -Bromoacetic acid*
 -Bromobenzene*
 -Bromoform*
 -1-Bromopropionic acid*
 -tert.-Butyl iodide*
 -Butyramide*
 -Butyric acid*
 -Caffeine*
 -Camphor*
 -Camphoric acid*
 -Camphorquinone phenylhydrazone*
 -Caproic acid*
 -Carbon disulfide*
 -Carbon disulfide*-Iodine
 -Carbon tetrachloride*

Chloroform.—(Continued)
 -Chloral hydrate*
 -Chlorine*
 -Chloroacetamide*
 -Chloroacetic acid*
 -Chlorobenzene*
 -*o*-Chlorobenzoic acid*
 -1-Chlorotetrahydronaphthalene
 Vapor pressure, **3**: 287
 -Cholesterol
 Density, **3**: 148
 -Citric acid
 Density, **3**: 147
 -*m*-Cresol
 Vapor pressure, **3**: 287
 - α -Crotonic acid
 Distribution coefficients in water, **3**: 426
 -Cyclohexane
 Heat of solution, **5**: 155
 Viscosity, **5**: 33
 -Cyclohexanone
 Vapor pressure, **3**: 287
 -Cyclohexene
 Heat of solution, **5**: 155
 -Diamylammonium chloride
 Density, **3**: 148
 -Dibenzyl sulfoxide
 Boiling point elevation, **3**: 332
 -Dibenzylammonium chloride
 Boiling point elevation, **3**: 332
 -*p*-Dibromobenzene
 Density, **3**: 147
 -1, 2-Dibromopropionic acid
 Distribution coefficients in water, **3**: 425
 -Dichloroacetamide
 Boiling point elevation, **3**: 331
 -Diethyl malate
 Boiling point elevation, **3**: 332
 -Diethyl tartrate
 Boiling point elevation, **3**: 332
 Density, **3**: 147
 -Diethylamine
 Distribution coefficients in water, **3**: 426
 -Diethylammonium chloride
 Boiling point elevation, **3**: 331
 Density, **3**: 147
 Viscosity, **5**: 32
 -Diethylammonium chloride-Tetrapropylammonium iodide
 Boiling point elevation, **3**: 348
 -Diethylammonium nitrate
 Density, **3**: 147
 Viscosity, **5**: 32
 -Diethylaniline hydrochloride
 Boiling point elevation, **3**: 332
 -Diethylaniline hydroiodide
 Boiling point elevation, **3**: 332
 -Diethylsulfone
 Boiling point elevation, **3**: 331
 -Diisoamylammonium chloride
 Boiling point elevation, **3**: 332
 Viscosity, **5**: 33
 -Dimethyl acetylmaleate
 Boiling point elevation, **3**: 332
 Density, **3**: 147
 -Dimethyl malate
 Boiling point elevation, **3**: 331
 -Dimethyl tartrate
 Boiling point elevation, **3**: 331
 Viscosity, **5**: 49
 -Dimethylamine
 Distribution coefficients in water, **3**: 425
 -Dimethylammonium chloride
 Boiling point elevation, **3**: 331
 -Dimethylaniline
 Boiling point elevation, **3**: 331
 Vapor pressure, **3**: 287

* Data for system will be found under this compound in Index. Full explanation on page vii.

Chloroform.—(Continued)

- Dimethylaniline hydrobromide*
Boiling point elevation, **3**: 331
- Dimethylpyrone hydrobromide*
Boiling point elevation, **3**: 331
- Dimethylpyrone picrate*
Boiling point elevation, **3**: 332
- Dimethylsulfoxide nitrate*
Boiling point elevation, **3**: 331
- m-Dinitrobenzene*
Density, **3**: 147
Vapor pressure, **3**: 359
- 2, 4-Dinitrobenzoic acid*
Distribution coefficients in water, **3**: 429
- 3, 5-Dinitrobenzoic acid*
Distribution coefficients in water, **3**: 429
- Diphenyl*
Boiling point elevation, **3**: 332
Density, **3**: 148
- Diphenylamine*
Boiling point elevation, **3**: 332
- Dipropylammonium chloride*
Boiling point elevation, **3**: 331
- Durene*
Density, **3**: 148
- Ethyl acetate*
Heat of solution, **5**: 151, 155
- Ethyl alcohol*
Boiling point, **3**: 312
Compressibility, **3**: 440
Density, **3**: 146; **7**: 78
Aqueous solution, **3**: 125
Dielectric constant, **6**: 102
Heat of solution, **5**: 151, 155
Miscibility in water, **3**: 410
Refractive index, **7**: 78
Dispersion, **7**: 103
Surface tension, **4**: 471
Viscosity, **5**: 32
- Ethyl alcohol-Iodine*
Freezing point-solubility, **4**: 268
- Ethyl amyl ether*
Density, **3**: 147
Dielectric constant, **6**: 102
- Ethyl benzoate*
Boiling point elevation, **3**: 332
- Ethyl ether*
Compressibility, **3**: 440
Density, **3**: 147
Dielectric constant, **6**: 102
Freezing point-solubility, **4**: 99
Heat of solution, **5**: 151, 155, 158
Specific heat, **5**: 126
Surface tension, **4**: 471
Vapor pressure, **3**: 286, 375
Viscosity, **5**: 32
- Ethyl ether-Iodine*
Freezing point-solubility, **4**: 268
- Ethyl ether-Naphthalene*
Vapor pressure, **3**: 375
- Ethyl ether-Picric acid*
Vapor pressure, **3**: 375
- Ethylacetanilide*
Boiling point elevation, **3**: 332
- Ethylamine*
Distribution coefficients in water, **3**: 425
- Ethylaniline hydrochloride*
Boiling point elevation, **3**: 332
- Ethylaniline hydroiodide*
Boiling point elevation, **3**: 332
- Ethylene bromide*
Density, **3**: 146
Dielectric constant, **6**: 102
Heat of solution, **5**: 155
- Ethylphenylhydrazine hydrochloride*
Boiling point elevation, **3**: 332
- Ethylxanthic acid*
Distribution coefficients in water, **3**: 428
- Ferric chloride*
Boiling point elevation, **3**: 332

Chloroform.—(Continued)

- Formaldehyde*
Distribution coefficients in water, **3**: 422
- Formanilide*
Boiling point elevation, **3**: 331
- Formic acid*
Distribution coefficients in water, **3**: 422
- Fumaric acid*
Freezing point-solubility, **4**: 99
- Gentisic acid*
Distribution coefficients in water, **3**: 430
- Glutaric acid*
Distribution coefficients in water, **3**: 427
- Glycolanilide*
Boiling point elevation, **3**: 331
- Heptane*
Density, **3**: 147
Dielectric constant, **6**: 102
Heat of solution, **5**: 151
- Hexahydrocresol*
Vapor pressure, **3**: 287
- Hexahydrophenol*
Vapor pressure, **3**: 287
- Hydrocinnamic acid*
Distribution coefficients in water, **3**: 431
- Hydrogen peroxide*
Distribution coefficients in water, **3**: 419
- Hydrogen sulfide*
Density, **3**: 135
Viscosity, **5**: 27
- Iodine*
Boiling point elevation, **3**: 331
Distribution coefficients in water, **3**: 420
Freezing point-solubility, **4**: 33
Viscosity, **5**: 26
- Iodine-Propyl alcohol*
Freezing point-solubility, **4**: 268
- o-Iodobenzoic acid*
Distribution coefficients in water, **3**: 429
- 2-Iodopropionic acid*
Distribution coefficients in water, **3**: 425
- Isoamyl alcohol*
Heat of solution, **5**: 155
- Isoanethole*
Boiling point elevation, **3**: 332
- Isobutyl alcohol*
Heat of solution, **5**: 155
- Isobutylacetamide*
Boiling point elevation, **3**: 331
- Isobutylammonium chloride*
Boiling point elevation, **3**: 331
- Isobutylammonium iodide*
Boiling point elevation, **3**: 331
- Isobutyramide*
Boiling point elevation, **3**: 331
- Isobutyric acid*
Distribution coefficients in water, **3**: 426
- Isocaproic acid*
Distribution coefficients in water, **3**: 428
- Isovaleric acid*
Boiling point elevation, **3**: 331
Distribution coefficients in water, **3**: 427
- Lactanilide*
Boiling point elevation, **3**: 332
- Lactic acid*
Distribution coefficients in water, **3**: 425
- Levulinic acid*
Distribution coefficients in water, **3**: 427

Chloroform.—(Continued)

- Maleic acid*
Freezing point-solubility, **4**: 99
- Mercuric chloride*
Distribution coefficients in water, **3**: 421
- Metanethole*
Boiling point elevation, **3**: 332
- p-Methoxybenzoic acid*
Distribution coefficients in water, **3**: 431
- p-Methoxymethylbenzene*
Boiling point elevation, **3**: 331
- Methyl alcohol*
Boiling point, **3**: 312
Density, **3**: 146
Aqueous solution, **3**: 125
Heat of solution, **5**: 151, 155
Miscibility in water, **3**: 410
- Methylacetanilide*
Boiling point elevation, **3**: 332
Density, **3**: 148
- Methylamine*
Distribution coefficients in water, **3**: 423
- Methylaniline hydrobromide*
Boiling point elevation, **3**: 331
- Methylaniline hydrochloride*
Boiling point elevation, **3**: 331
- Methylene chloride*
Freezing point-solubility, **4**: 98
- N-Methylphenylacridinium bromide*
Boiling point elevation, **3**: 332
- N-Methylphenylacridinium chloride*
Boiling point elevation, **3**: 332
- N-Methylphenylacridinium iodide*
Boiling point elevation, **3**: 332
- Naphthalene*
Boiling point elevation, **3**: 332
Density, **3**: 148
Freezing point-solubility, **4**: 172
Heat of solution, **5**: 151
Specific heat, **5**: 126
Viscosity, **5**: 33
- Naphthalene picrate*
Boiling point elevation, **3**: 332
- Naphthalene tetrachloride*
Density, **3**: 148
- α-Naphthylamine*
Boiling point elevation, **3**: 332
Freezing point-solubility, **4**: 99
- Nicotine*
Density, **3**: 148
- Nitrobenzene*
Vapor pressure, **3**: 286
- Nitrobenzoic acid (o-, m-, p-)*
Distribution coefficients in water, **3**: 429
- Nitrogen trioxide*
Distribution coefficients in water, **3**: 420
- Nitronaphthalene*
Heat of solution, **5**: 151
- o-Nitrophenol*
Density, **3**: 147
Heat of solution, **5**: 151
- Octane*
Heat of solution, **5**: 151
- Oleates*
Dielectric constant, **6**: 104
- Paraldehyde*
Heat of solution, **5**: 155
- Pentane*
Density, **3**: 147
Dielectric constant, **6**: 102
- Phenanthrene*
Freezing point-solubility, **4**: 172
- Phenetole*
Density, **3**: 147
Viscosity, **5**: 33

Chloroform.—(Continued)

- Phenol
 - Density, **3**: 147
 - Distribution coefficients in water, **3**: 428
 - Heat of solution, **5**: 151
- Phenyl ether
 - Density, **3**: 148
 - Viscosity, **5**: 33
- Phenylacetamide
 - Boiling point elevation, **3**: 331
- Phenylacetic acid
 - Distribution coefficients in water, **3**: 431
- Phenylacridine
 - Boiling point elevation, **3**: 332
- Phenylacridinium chloride
 - Boiling point elevation, **3**: 332
- Phenylacridinium iodide
 - Boiling point elevation, **3**: 332
- Phenylurethan
 - Boiling point elevation, **3**: 332
- Phosphorus oxychloride
 - Boiling point elevation, **3**: 331
- Phthalimidine
 - Boiling point elevation, **3**: 331
- Picric acid
 - Boiling point elevation, **3**: 331
 - Distribution coefficients in water, **3**: 427
- Piperidine
 - Distribution coefficients in water, **3**: 427
- Piperidine picrate
 - Boiling point elevation, **3**: 332
- Piperonylic acid
 - Distribution coefficients in water, **3**: 430
- Propionamide
 - Boiling point elevation, **3**: 331
 - Density, **3**: 146
- Propionic acid
 - Distribution coefficients in water, **3**: 425
 - Miscibility in water, **3**: 410
- Propyl alcohol
 - Density, aqueous solution, **3**: 125
 - Heat of solution, **5**: 151, 155
 - Miscibility in water, **3**: 410
- Propyl iodide
 - Boiling point elevation, **3**: 331
- Propylammonium chloride
 - Boiling point elevation, **3**: 331
- Pyridine
 - Distribution coefficients in water, **3**: 427
 - Heat of solution, **5**: 151
- Pyridine acetate
 - Heat of solution, **5**: 151
- Pyruvic acid
 - Distribution coefficients in water, **3**: 425
- Quinoline ethiodide
 - Boiling point elevation, **3**: 332
- Quinoline hydrobromide
 - Boiling point elevation, **3**: 332
- Quinoline hydrochloride
 - Boiling point elevation, **3**: 332
- Quinoline hydroiodide
 - Boiling point elevation, **3**: 332
- Salicylamide
 - Boiling point elevation, **3**: 331
- Salicylic acid
 - Boiling point elevation, **3**: 331
 - Density, **3**: 147
 - Distribution coefficients in water, **3**: 430
- Stannic chloride
 - Density, **3**: 137
- Stearic acid
 - Density, **3**: 148

Chloroform.—(Continued)

- Strychnine
 - Distribution coefficients in water, **3**: 433
- Succinic acid
 - Distribution coefficients in water, **3**: 426
- Succinonitrile
 - Boiling point elevation, **3**: 331
 - Distribution coefficients in water, **3**: 426
- Sulfur
 - Boiling point elevation, **3**: 331
 - Freezing point-solubility, **4**: 35
- Sulfur dioxide
 - Density, **3**: 135
 - Distribution coefficients in water, **3**: 420
 - Viscosity, **5**: 27
- Tetraethylammonium bromide
 - Boiling point elevation, **3**: 332
 - Density, **3**: 148
 - Surface tension, **4**: 471
 - Viscosity, **5**: 33
- Tetraethylammonium chloride
 - Boiling point elevation, **3**: 332
 - Density, **3**: 148
 - Viscosity, **5**: 33
- Tetraethylammonium nitrate
 - Boiling point elevation, **3**: 332
- Tetrahydronaphthalene
 - Vapor pressure, **3**: 287
 - Viscosity, **5**: 33
- Tetraisoamylammonium iodide
 - Boiling point elevation, **3**: 332
- Tetrapropylammonium bromide
 - Boiling point elevation, **3**: 332
- Tetrapropylammonium chloride
 - Boiling point elevation, **3**: 332
- Tetrapropylammonium iodide
 - Boiling point elevation, **3**: 332
- Tetrapropylammonium nitrate
 - Boiling point elevation, **3**: 332
- Tetrapropylammonium picrate
 - Boiling point elevation, **3**: 332
- Tetryl
 - Freezing point-solubility, **4**: 99
- Thionyl chloride
 - Boiling point elevation, **3**: 331
- Toluene
 - Boiling point, **3**: 312
 - Density, **3**: 147
 - Heat of solution, **5**: 155
 - Vapor pressure, **3**: 287
- p-Toluidine
 - Boiling point elevation, **3**: 331
 - Density, **3**: 147
 - Heat of solution, **5**: 151
- p-Toluidine chloroacetate
 - Boiling point elevation, **3**: 332
- Tribenzylammonium chloride
 - Boiling point elevation, **3**: 332
- Trichloroacetamide
 - Boiling point elevation, **3**: 331
- Trichloroacetic acid
 - Boiling point elevation, **3**: 331
- Trichloroethylene
 - Freezing point-solubility, **4**: 98
- Trichlorolactamide
 - Boiling point elevation, **3**: 331
- Triethylamine
 - Distribution coefficients in water, **3**: 429
- Triethylammonium bromide
 - Boiling point elevation, **3**: 331
- Triethylammonium chloride
 - Boiling point elevation, **3**: 331
 - Density, **3**: 147
 - Viscosity, **5**: 33
- Triethylammonium iodide
 - Boiling point elevation, **3**: 331

Chloroform.—(Continued)

- Triethylsulfonium bromide
 - Boiling point elevation, **3**: 331
- Triethylsulfonium chloride
 - Boiling point elevation, **3**: 331
- Triethylsulfonium iodide
 - Boiling point elevation, **3**: 331
- Triisoamylammonium picrate
 - Boiling point elevation, **3**: 332
- Trimethylamine
 - Distribution coefficients in water, **3**: 425
- Trinitrotoluene
 - Density, **3**: 147
- Tripalmitin
 - Boiling point elevation, **3**: 332
- Triphenylmethane
 - Boiling point elevation, **3**: 332
 - Density, **3**: 148
- Tripropylamine
 - Boiling point elevation, **3**: 332
- Tristearin
 - Boiling point elevation, **3**: 332
- Urethan
 - Boiling point elevation, **3**: 331
 - Density, **3**: 146
 - Freezing point-solubility, **4**: 172
 - Heat of solution, **5**: 151
- Valeramide
 - Boiling point elevation, **3**: 331
- Valeric acid
 - Distribution coefficients in water, **3**: 427
- p-Xylene
 - Heat of solution, **5**: 155
- o*-Chloroformanilide
 - p-Chloroformanilide
 - Freezing point-solubility, **4**: 178
- Chlorogenic acid
 - Optical rotatory power, **7**: 467
- Chlorohydrin
 - Diffusion in methyl alcohol, **5**: 72
 - Electrical conductivity, **6**: 143
 - Surface tension, **4**: 450
- Chlorohydroquinol
 - Heat of combustion, **5**: 169
- p*-Chloriodobenzene
 - Surface tension, **4**: 453
- p-Dichlorobenzene
 - Freezing point-solubility, **4**: 123
- p-Diiodobenzene
 - Freezing point-solubility, **4**: 123
- Chloromagnesite
 - Density, **1**: 141
 - Melting point, **1**: 141
 - Refractive index, **1**: 141, 167
 - See also Magnesium chloride.
- Chloromalonic acid
 - Decomposition, kinetics of, **7**: 122
 - Electrical conductivity, aqueous solution, **6**: 263
- Chloromanganokalite, density, **1**: 157
- Chloromethyl methyl ether
 - Azeotropic mixtures, **3**: 319–320
- Chloromethylsilicane, density, gas, **3**: 3
- α -Chloronaphthalene
 - Absorption spectra, **5**: 345
 - Birefringence, magnetic, **7**: 111
 - Boiling point, **3**: 226
 - Diffusion in benzene, **5**: 74
 - Diffusion in methyl alcohol, **5**: 73
 - Polarization of light scattered by **5**: 267
 - Refractive index, **7**: 49
 - Surface tension, **4**: 437, 459
 - Vapor pressure, **3**: 226
 - Antimony tribromide*
 - Antimony trichloride*
 - Picric acid
 - Freezing point-solubility, **4**: 120
 - Styphnic acid
 - Freezing point-solubility, **4**: 122

* Data for system will be found under this compound in Index. Full explanation on page vii.

β -Chloronaphthalene

- Absorption spectra, **5**: 345
Cryoscopic constant, **4**: 184
Refractive index, **7**: 49
-Antimony tribromide*
-Antimony trichloride*
-Picric acid
Freezing point-solubility, **4**: 120
-Quinoline
Density, **7**: 87
Refractive index, **7**: 87
Dispersion, **7**: 106
- Chloronitrobenzene**
Diffusion in benzene, **5**: 74
Diffusion in methyl alcohol, **5**: 72
- o-Chloronitrobenzene**
Cryoscopic constant, **4**: 183
Surface tension, **4**: 453
Viscosity, **5**: 43
-Aluminum bromide*
-Aluminum chloride*
-Aniline*
-Benzene*
-o-Bromonitrobenzene*
-Camphor*
-p-Chloronitrobenzene
Freezing point-solubility, **4**: 175
-Diphenylamine
Density, **3**: 173
Viscosity, **5**: 43
-Formic acid
Freezing point-solubility, **4**: 99
- m-Chloronitrobenzene**
Cryoscopic constant, **4**: 183
Crystallization velocity, **5**: 61
Crystallography, **1**: 325
Heat of fusion, **5**: 132
Surface tension, **4**: 453
-Aluminum bromide*
-Aluminum chloride*
-Aniline*
-Benzene*
-m-Bromonitrobenzene*
-Camphor*
-p-Dibromobenzene
Freezing point-solubility, **4**: 175
-m-Fluoronitrobenzene
Freezing point-solubility, **4**: 123
-m-Iodonitrobenzene
Freezing point-solubility, **4**: 123
-Naphthalene
Freezing point-solubility, **4**: 123
- p-Chloronitrobenzene**
Cryoscopic constant, **4**: 183
Heat of fusion, **5**: 132
Surface tension, **4**: 453
-Aluminum bromide*
-Aluminum chloride*
-Aniline*
-Benzene*
-p-Bromonitrobenzene*
-o-Chloronitrobenzene*
-p-Dibromobenzene
Freezing point-solubility, **4**: 123
-Diphenylamine
Freezing point-solubility, **4**: 124
-Naphthalene
Freezing point-solubility, **4**: 124
- 3-Chloro-2-nitrobenzoic acid**
-5-Chloro-2-nitrobenzoic acid
Freezing point-solubility in water, **4**: 418
- Chloronitrocamphor**
Verdet constant, **6**: 430
- 2-Chloro-4-nitrophenol**, electrical conductivity, aqueous solution, **6**: 271
- 2-Chloro-3-nitrotoluene**
-2-Chloro-4-nitrotoluene
Freezing point-solubility, **4**: 178
-2-Chloro-5-nitrotoluene
Freezing point-solubility, **4**: 178

2-Chloro-3-nitrotoluene.—(Continued)

- 2-Chloro-6-nitrotoluene
Freezing point-solubility, **4**: 147
-3-Chloro-4-nitrotoluene
Freezing point-solubility, **4**: 179
-3-Chloro-6-nitrotoluene
Freezing point-solubility, **4**: 179
- 2-Chloro-4-nitrotoluene**
-2-Chloro-3-nitrotoluene*
-2-Chloro-5-nitrotoluene
Freezing point-solubility, **4**: 147
-2-Chloro-6-nitrotoluene
Freezing point-solubility, **4**: 179
- 2-Chloro-5-nitrotoluene**
-2-Chloro-3-nitrotoluene*
-2-Chloro-4-nitrotoluene*
-2-Chloro-6-nitrotoluene
Freezing point-solubility, **4**: 179
- 2-Chloro-6-nitrotoluene**
-2-Chloro-3-nitrotoluene*
-2-Chloro-4-nitrotoluene*
-2-Chloro-5-nitrotoluene*
- 3-Chloro-4-nitrotoluene**
-2-Chloro-3-nitrotoluene*
-3-Chloro-6-nitrotoluene
Freezing point-solubility, **4**: 179
- 3-Chloro-6-nitrotoluene**
-2-Chloro-3-nitrotoluene*
-3-Chloro-4-nitrotoluene*
- 4-Chloro-2-nitrotoluene**
-4-Chloro-3-nitrotoluene
Freezing point-solubility, **4**: 179
- 4-Chloro-3-nitrotoluene**
-4-Chloro-2-nitrotoluene*
- 2-Chloro-5-nitro-p-toluenesulfone chloride**
-2-Chloro-6-nitro-p-toluenesulfone chloride
Freezing point-solubility, **4**: 145
- 6-Chloro-4-nitro-m-toluidine**
-6-Chloro-3-nitro-p-toluidine
Freezing point-solubility, **4**: 150
- Chloropentammine cobaltic chloroplatinate**
Solubility in aqueous solutions, **7**: 331
- Chloropentammine cobaltic dibromide**
Solubility in aqueous solutions, **7**: 328
- Chloropentammine cobaltic dichloride**
Solubility in aqueous solutions, **7**: 328
- Chloropentammine cobaltic dinitrate**
Solubility in aqueous solutions, **7**: 330
- Chloropentammine cobaltic oxalate**
Solubility in aqueous solution, **7**: 331
- Chloropentammine cobaltic tetranitrodiammine cobaltate**
Solubility in aqueous solutions, **7**: 334
- Chloropentammine cobaltic tetrathiocyanatodiammine chromiate**
Solubility in aqueous solutions, **7**: 337
- 9-Chlorophenanthrene**
-Quinoline
Density, **7**: 88
Refractive index, **7**: 88
Dispersion, **7**: 107
- p-Chlorophenetole**
Birefringence, magnetic, **7**: 111
- Chlorophenol**
Diffusion in benzene, **5**: 74
Diffusion in methyl alcohol, **5**: 72
-Ethyl alcohol
Viscosity, **5**: 38
- o-Chlorophenol**
Absorption spectra, **5**: 338
Birefringence, electric, **7**: 111
Cryoscopic constant, **4**: 183
Dielectric constant, **6**: 89
Electrical conductivity, aqueous solution, **6**: 272
Solubility in water, **3**: 389; **4**: 252
Specific heat, **5**: 110
Surface tension, **4**: 454
Viscosity, **5**: 39, 41, 43; **7**: 217
-Acetone*

o-Chlorophenol.—(Continued)

- Aniline*
-Benzene*
-p-Chlorophenol
Freezing point-solubility, **4**: 176
-Dimethylaniline
Density, **3**: 175
Freezing point-solubility, **4**: 128
Heat of solution, **5**: 158
Specific heat, **5**: 128
Viscosity, **5**: 44
-Diphenylmethylaniline
Density, **3**: 176
Freezing point-solubility, **4**: 128
Viscosity, **5**: 44
-Ethyl alcohol
Density, **3**: 159
-Isoamyl acetate
Density, **3**: 175
Viscosity, **5**: 44
-Phenylhydrazine
Density, **3**: 175
Viscosity, **5**: 44
-Pyridine
Density, **3**: 169
Freezing point-solubility, **4**: 116
Heat of solution, **5**: 158
Specific heat, **5**: 127
Viscosity, **5**: 41
-Quinoline
Density, **3**: 175
Freezing point-solubility, **4**: 128
Heat of solution, **5**: 159
Specific heat, **5**: 128
Viscosity, **5**: 44
- m-Chlorophenol**
Absorption spectra, **5**: 338
Cryoscopic constant, **4**: 183
Solubility in water, **3**: 389; **4**: 251, 252
Surface tension, **4**: 454
Viscosity, **5**: 44; **7**: 217
-Aniline*
-Benzene*
-Ethyl alcohol
Density, **3**: 159
-Isoamyl acetate
Density, **3**: 176
Viscosity, **5**: 44
- p-Chlorophenol**
Absorption spectra, **5**: 338
Azeotropic mixtures, **3**: 322
Cryoscopic constant, **4**: 183
Electrical conductivity, aqueous solution, **6**: 272
Solubility in water, **3**: 389; **4**: 252
Surface tension, **4**: 454
Viscosity, **5**: 44; **7**: 217
-Aniline*
-Benzene*
-o-Chlorophenol*
-Ethyl alcohol
Density, **3**: 159
-Isoamyl acetate
Density, **3**: 176
Viscosity, **5**: 44
- Chloropicrin**
Azeotropic mixtures, **3**: 318
Birefringence, **7**: 110
Boiling point, **3**: 215
Heat of adsorption on charcoal, **5**: 140
Solubility in water, **3**: 387
Surface tension, **4**: 447
Toxicology, **2**: 319
Vapor pressure, **3**: 215
- Chloroplatinic acid**
Absorption spectra, solutions, **5**: 328
Heat of formation, **5**: 189
- Chloroplatinous acid**
Heat of formation, **5**: 189
- Chloroplumbic acid**
Free energy of aqueous solution, **7**: 249

* Data for system will be found under this compound in Index. Full explanation on page vii.

Chloropropionic acid (α -, β -), electrical conductivity, aqueous solution, **6**: 264
 γ -Chloropropylbenzene, viscosity, **7**: 220
2-Chloropropylene
 Dielectric constant, **6**: 82
3-Chloropropylene
 Birefringence, electric, **7**: 110
 Boiling point, **3**: 217
 Dielectric constant, **6**: 82
 Refractivity, **7**: 10
 Verdet constant, **6**: 428
 Viscosity, **7**: 214
Chlorquinol
 Silver reduction equivalent, **5**: 439
Chloroquinone, heat of combustion, **5**: 169
Chlorosilicane
 Density
 Gas, **3**: 3
 Liquid, **3**: 23
 Vapor pressure
 Liquid, **3**: 214
 Solid, **3**: 207
Chlorostannic acid
 Heat of formation, **5**: 183
Chlorosuccinic acid
 Electrical conductivity, aqueous solution, **6**: 266
 Optical rotatory power, **7**: 369
 -*1-Bromosuccinic acid**
 -*Ethyl alcohol*
 Photochemical reaction, **7**: 164
d-Chlorosuccinic acid
 -*l-Chlorosuccinic acid*
 Freezing point-solubility, **4**: 113
Chlorosulfonic acid
 Boiling point, **1**: 107, 162
 Density, **1**: 107; **3**: 22
 Electrical conductivity, **6**: 142
 Heat of formation, **5**: 178
 Heat of vaporization, **5**: 136
 Melting point, **1**: 107
 Refractive index, **1**: 107, 165
 -*Sulfur pentoxydichloride*
 Freezing point-solubility, **4**: 42
1-Chlorotetrahydronaphthalene
 -*Acetone**
 -*Carbon tetrachloride**
 -*Chloroform**
 -*Ethyl alcohol*
 Vapor pressure, **3**: 288
 -*Methyl acetate*
 Vapor pressure, **3**: 289
Chlorotitanic acid
 Heat of formation, **5**: 183
Chlorotoluene, specific heat, **5**: 111
o-Chlorotoluene
 Absorption spectra, **5**: 341
 Azeotropic mixtures, **3**: 321
 Birefringence, electric, **7**: 111
 Dielectric constant, **6**: 91
 Diffusion of vapor in air, **5**: 62
 Heat of vaporization, **5**: 137
 Refractive index, **7**: 40
 Verdet constant, **6**: 429
 -*Antimony tribromide**
 -*Antimony trichloride**
 -*p-Chlorotoluene*
 Freezing point-solubility, **4**: 179
m-Chlorotoluene
 Absorption spectra, **5**: 341
 Dielectric constant, **6**: 92
 Diffusion of vapor in air, **5**: 62
 Refractive index, **7**: 40
 -*Antimony tribromide**
 -*Antimony trichloride**
p-Chlorotoluene
 Absorption spectra, **5**: 341
 Azeotropic mixtures, **3**: 321
 Birefringence, electric, **7**: 111
 Cryoscopic constant, **4**: 183
 Dielectric constant, **6**: 92

p-Chlorotoluene.—(*Continued*)
 Diffusion of vapor in air, **5**: 62
 Heat of vaporization, **5**: 137
 Melting point under pressure, **4**: 10
 Refractive index, **7**: 40
 Surface tension, **4**: 456
 Verdet constant, **6**: 429
 -*Antimony tribromide**
 -*Antimony trichloride**
 -*o-Chlorotoluene**
Choleinic acid
 Optical rotatory power, **7**: 467
Cholestane
 Optical rotatory power, **7**: 462
 -*Benzene**
Cholestanol, optical rotatory power, **7**: 463
Cholestene
 Optical rotatory power, **7**: 462
 -*Benzene**
Cholesterol
 Optical rotatory power, **7**: 463
 Transition temperature, **4**: 8
 -*Benzene**
 -*Cetyl alcohol**
 -*Chloroform**
 -*Oleic acid*
 Freezing point-solubility, **4**: 181
 -*Palmitic acid*
 Freezing point-solubility, **4**: 181
 -*Stearic acid*
 Freezing point-solubility, **4**: 181
Cholesteryl acetate
 Optical rotatory power, **7**: 463
 -*Phytosteryl acetate* (α -, β -)
 Freezing point-solubility, **4**: 167
Cholesteryl benzoate
 Crystallography, **1**: 337
 Melting point under pressure, **4**: 10
 Surface tension, **4**: 463
 -*p-Azoxyphenetole**
Cholesteryl isobutyrate
 -*p-Azoxyphenetole**
Cholesteryl propionate
 -*p-Azoxyphenetole**
 α -Cholesterylene
 -*Benzene**
Choline hydrochloride, absorption spectra, ultra-violet, **5**: 366
Chondrodine
 Optical rotatory power, **7**: 475
Chondrodite
 Density, **1**: 142
 Refractive index, **1**: 142, 171
Christoffe metal, **2**: 374
Christophite
 Solution velocity in sulfuric acid, **5**: 58
Chromal steel, **2**: 374, 472, 605
Chromaluminium, **2**: 374
Chromate ion, dissociation constant, **7**: 286
Chromax (alloy), **2**: 374
 Electrical conductivity, **6**: 193
Chrome brick
 Crushing strength, **2**: 83
 Density, **2**: 82
 Electrical conductivity, **2**: 86
 Expansion on heating, **2**: 84
 Fusion temperature, **2**: 83
 Specific heat, **2**: 85
 Temperature of failure under load, **2**: 83
 Thermal conductivity, **2**: 85
 Thermal expansion, **2**: 83
Chromel (alloy), **2**: 374; cf. 467, 480, 608
 Annealing and forging range, **2**: 482
 Brightness temperature, **1**: 60
 Density, **2**: 480
 Electrical conductivity, **6**: 193
 Mechanical properties, **2**: 480
Chromic acid
 Absorption spectra, solutions, **5**: 328
 Electrical conductivity, aqueous solution, **6**: 245

Chromic acid.—(*Continued*)
 Heat of formation, **5**: 193
 Magnetic susceptibility, **6**: 358
 Viscosity of aqueous solution, **5**: 14
 -*Ammonium chromate**
 -*Ammonium hydroxide**
 -*Bismuth hydroxide**
 -*Boric acid**
 -*Lead hydroxide*
 Freezing point-solubility in water, **4**: 377
 -*Lithium hydroxide*
 Freezing point-solubility in water, **4**: 379, 393
 -*Mercuric oxide*
 Freezing point-solubility in water, **4**: 378
 -*Molybdenum trioxide*
 Density, aqueous solution, **3**: 98
 -*Nitric acid*
 Freezing point-solubility in water, **4**: 363
 -*Potassium chromate*
 Density, aqueous solution, **3**: 98
 -*Potassium hydroxide*
 Freezing point-solubility in water, **4**: 380, 394
 -*Selenic acid*
 Freezing point-solubility in water, **4**: 356
 -*Sodium chromate*
 Density, aqueous solution, **3**: 98
 -*Sodium hydroxide*
 Freezing point-solubility in water, **4**: 379, 393
 -*Sulfuric acid*
 Freezing point-solubility in water, **4**: 347, 390
 -*Thorium chromate*
 Freezing point-solubility in water, **4**: 378, 393
 -*Zinc oxide*
 Freezing point-solubility in water, **4**: 377
Chromic bromide
 Density, aqueous solution, **3**: 69
 Electrical conductivity, aqueous solution, **6**: 234, 239
 Heat of formation, **5**: 193
 Refractive index, aqueous solution, **7**: 71
 Dispersion, **7**: 101
 Solubility in aluminum bromide, **4**: 61
Chromic chloride
 Absorption spectra, solutions, **5**: 327
 Density, aqueous solution, **3**: 69
 Electrical conductivity, aqueous solution, **6**: 231, 233
 Heat of formation, **5**: 193
 Hydrolysis constants, **7**: 286
 Magnetic susceptibility, **6**: 358
 Aqueous solution, **6**: 364
 Refractive index, aqueous solution, **7**: 71
 Dispersion, **7**: 101
 Solubility in aluminum chloride, **4**: 61
 Viscosity of aqueous solution, **5**: 14
 X-rays, absorption coefficient, **6**: 13
 -*Acetone**
 -*Chromic nitrate-Chromic sulfate*
 Refractive index, aqueous solution, **7**: 98
 -*Ethyl alcohol*
 Boiling point elevation, **3**: 337
 -*Methyl alcohol*
 Boiling point elevation, **3**: 334
Chromic fluoride
 Dielectric constant, **6**: 76
 Heat of formation, **5**: 193

* Data for system will be found under this compound in Index. Full explanation on page vii.

Chromic hexamminotrinitrateSolubility in aqueous solution, **7**: 330**Chromic hydroxide**Heat of formation, **5**: 193Ionization constant, **7**: 286Magnetic susceptibility, **6**: 358**Chromic methylamine sulfate**, decomposition pressure of hydrate, **7**: 287**Chromic nitrate**Absorption spectra, solutions, **5**: 327Density, aqueous solution, **3**: 70Electrical conductivity, aqueous solution, **6**: 237, 240Magnetic susceptibility, **6**: 359Aqueous solution, **6**: 364Refractive index, aqueous solution, **7**: 71Verdet constant, aqueous solution, **6**: 428-*Chromic chloride**-*Chromic sulfate***Chromic oxide**Albedo, **5**: 263Band spectra, **5**: 412Electrical conductivity, **6**: 154Emission, spectral, **5**: 242Fusion temperature, **2**: 83Heat of formation, **5**: 193Heat of vaporization, **7**: 287Magnetic susceptibility, **6**: 358Melting point, **4**: 84Photoelectric current, **6**: 68Specific heat, **5**: 98Thermal conductivity, **5**: 216Thermoelectric power, **6**: 224**Chromic potassium cyanide**Absorption spectra, solutions, **5**: 331Density, **1**: 157Melting point, **1**: 157Refractive index, **1**: 157, 170**Chromic potassium oxalate**Absorption spectra, solutions, **5**: 327**Chromic potassium sulfate**Absorption spectra, solutions, **5**: 327Decomposition pressure of hydrate, **7**: 307Density, **1**: 157Aqueous solution, **3**: 92Magnetic susceptibility, **6**: 360Osmotic pressure, **4**: 431Refractive index, **1**: 157, 165; **7**: 13Solubility in water, **4**: 242Specific heat, **5**: 101Thermal conductivity, **5**: 217, 231Vapor pressure of aqueous solution, **3**: 374-*Aluminum potassium sulfate****Chromic rubidium sulfate**Decomposition pressure of hydrate, **7**: 309Density, **1**: 160Dielectric constant, **6**: 99Refractive index, **1**: 160, 165Solubility in water, **4**: 243**Chromic sodium sulfate**, decomposition pressure of hydrate, **7**: 304**Chromic sulfate**Absorption spectra, solutions, **5**: 327, 328Decomposition pressure of hydrates, **7**: 287Density, aqueous solution, **3**: 70Electrical conductivity, aqueous solution, **6**: 236Freezing point lowering of aqueous solution, **4**: 257Heat of formation, **5**: 193Magnetic susceptibility, **6**: 358Aqueous solution, **6**: 364Refractive index, aqueous solution, **7**: 71Specific heat, **5**: 98Verdet constant, aqueous solution, **6**: 428**Chromic sulfate**.—(Continued)Viscosity of aqueous solution, **5**: 14-*Chromic chloride**-*Chromic nitrate*-*Potassium sulfate*Surface tension of aqueous solution, **4**: 470**Chromic sulfide**Magnetic susceptibility, **6**: 358Photoelectric current, **6**: 69**Chromic thallium sulfate**Decomposition pressure of hydrate, **7**: 287Density, **1**: 133Refractive index, **1**: 133, 165Solubility in water, **4**: 226**Chromic thiocyanate**-*Ethyl ether*Distribution coefficients in water, **3**: 421**Chromite**Density, **1**: 133Refractive index, **1**: 133, 165**Chromium**Absorption, index of, **5**: 249Boiling point, **1**: 102; **3**: 205Cathodoluminescence, **5**: 390Compressibility, **3**: 46Critical potentials, **6**: 70Density, **1**: 104; **2**: 456Electrical conductivity, **1**: 104; **6**: 136Electrode potential, **6**: 332; **7**: 286Electronic structure, normal and excited, **6**: 70Emission, spectral, **5**: 242, 253Emission spectra, **5**: 289Hardness, **2**: 592Heat of evaporation, **1**: 102Heat of fusion, **1**: 104Heat of transition, **5**: 193Isotopes, **1**: 45Magnetic susceptibility, **6**: 354Melting point, **1**: 104Persistent lines, **5**: 323Quantum numbers, **5**: 408Refraction, index of, **5**: 249

Specific heat

Liquid, **5**: 94Solid, **1**: 104; **5**: 93Spectral series, **5**: 397Thermal expansion, **1**: 104; **2**: 460Thermochemistry, **5**: 193X-radiation from target of, **6**: 46X-ray absorption limits, **6**: 36, 44X-ray absorption spectra, **6**: 36X-ray crystal structure, **1**: 340X-ray lines, relative intensities, **6**: 32X-ray series, limiting frequencies, **6**: 35X-rays, absorption coefficient, **6**: 13X-rays, emission efficiency, **6**: 11X-rays, scattering, modification by, **6**: 17Zeeman effect, **5**: 420-*Aluminum**-*Aluminum**-*Carbon*-*Iron*-*Aluminum**-*Copper*-*Iron*-*Aluminum**-*Copper*-*Iron*-*Silicon*-*Antimony**-*Arsenic**-*Boron**-*Carbon**-*Carbon**-*Cerium*-*Iron*-*Carbon**-*Cerium*-*Iron*-*Nickel*-*Carbon**-*Copper*-*Iron*-*Carbon**-*Copper*-*Iron*-*Nickel*-*Carbon**-*Copper*-*Iron*-*Tungsten*-*Carbon**-*Iron*-*Carbon**-*Iron*-*Manganese*-*Carbon**-*Iron*-*Manganese*-*Molybdenum*-*Nickel***Chromium**.—(Continued)-*Carbon**-*Iron*-*Manganese*-*Molybdenum*-*Silicon*-*Carbon**-*Iron*-*Manganese*-*Silicon*-*Carbon**-*Iron*-*Manganese*-*Silicon*-*Tungsten*-*Carbon**-*Iron*-*Molybdenum*-*Carbon**-*Iron*-*Molybdenum*-*Nickel*-*Carbon**-*Iron*-*Molybdenum*-*Tungsten*-*Vanadium*-*Carbon**-*Iron*-*Molybdenum*-*Vanadium*-*Carbon**-*Iron*-*Nickel*-*Carbon**-*Iron*-*Nickel*-*Silicon*-*Carbon**-*Iron*-*Nickel*-*Uranium*-*Carbon**-*Iron*-*Nickel*-*Vanadium*-*Carbon**-*Iron*-*Silicon*-*Carbon**-*Iron*-*Tungsten*-*Carbon**-*Iron*-*Uranium*-*Carbon**-*Iron*-*Vanadium*-*Carbon**-*Tungsten*-*Cobalt*Curie point, **6**: 410Equilibrium diagram, **2**: 431Hardness, **2**: 593Kerr constant, **6**: 436Mechanical properties, **2**: 593Thermal conductivity, **5**: 224Thermal expansion, **2**: 464-*Cobalt*-*Nickel*Kerr constant, **6**: 436-*Copper*Electrical conductivity, **6**: 168Equilibrium diagram, **2**: 432-*Copper*-*Molybdenum*Equilibrium diagram, **2**: 444-*Copper*-*Nickel*Electrical conductivity, **6**: 169Endurance limits, **2**: 601, 606Equilibrium diagram, **2**: 443-*Gold*Equilibrium diagram, **2**: 424-*Iron*Electrical conductivity, **6**: 172, 178Equilibrium diagram, **2**: 451Magnetic properties, **6**: 391Thermal conductivity, **5**: 224Thermoelectric properties, **6**: 219-*Iron*-*Manganese*-*Nickel*Electrical conductivity, **6**: 185, 186, 193Magnetic field, effect of, **6**: 422Thermoelectric properties, **6**: 220-*Iron*-*Manganese*-*Silicon*Electrical conductivity, **6**: 179-*Iron*-*Molybdenum*Electrical conductivity, **6**: 179-*Iron*-*Molybdenum*-*Tungsten*Electrical conductivity, **6**: 179-*Iron*-*Nickel*Density, **2**: 480Elastic properties, **2**: 481Electrical conductivity, **6**: 185, 193Mechanical properties, **2**: 480Thermal expansion, **2**: 467Thermoelectric properties, **6**: 220-*Iron*-*Nickel*-*Silicon*Electrical conductivity, **6**: 186-*Iron*-*Nickel*-*Silicon*-*Vanadium*Electrical conductivity, **6**: 179-*Iron*-*Silicon*Electrical conductivity, **6**: 179Equilibrium diagram, **2**: 455Thermal expansion, **2**: 473-*Iron*-*Silicon*-*Titanium*Electrical conductivity, **6**: 179-*Iron*-*Tungsten*Electrical conductivity, **6**: 179-*Iron*-*Vanadium*Electrical conductivity, **6**: 179-*Lead*Equilibrium diagram, **2**: 414

* Data for system will be found under this compound in Index. Full explanation on page vii.

Chromium.—(Continued)

-Nickel

- Curie points, **6**: 409
 Electrical conductivity, **6**: 193
 Endurance limits, **2**: 600, 608
 Equilibrium diagram, **2**: 432
 Thermal conductivity, **5**: 224
 Thermal expansion, **2**: 467
 Thermoelectric properties, **6**: 219
 X-ray diffraction data, **1**: 349

-Silicon

- Density, **2**: 594

-Silver

- Equilibrium diagram, **2**: 421

Chromium ammines, freezing point lowering of aqueous solution, **4**: 257

Chromium carbide

- Heat of formation, **5**: 193

Chromium copper nickel steels

- Endurance limits, **2**: 604, 606

Chromium hydroxylamine sulfate, decomposition pressure of hydrate, **7**: 286

Chromium molybdenum nickel steels

- Endurance limits, **2**: 604, 605

Chromium molybdenum steels

- Endurance limits, **2**: 601, 605

Chromium nickel steels

- Analyses, table of, **2**: 486

- Compression tests, **2**: 512

- Density, **2**: 517

- Endurance limits, **2**: 600–608

- Mechanical properties, **2**: 510

- Specific heat, **2**: 518

- Thermal conductivity, **2**: 518

- Torsion tests, **2**: 512

Chromium nickel vanadium steels

- Endurance limits, **2**: 600, 604, 605

Chromium steels

- Analyses, table of, **2**: 485

- Density, **2**: 517

- Electrical conductivity, **6**: 179

- Endurance limits, **2**: 600–606

- Mechanical properties, **2**: 506

- Thermal conductivity, **2**: 518; **5**: 219, 224

- Thermal expansion, **2**: 472

- Thermoelectric properties, **6**: 222

Chromium tetrasulfide

- Magnetic susceptibility, **6**: 358

Chromium trioxide

- Boiling point elevation in aqueous solution, **3**: 325

- Density, aqueous solution, **3**: 69, 104

- Freezing point lowering of aqueous solution, **4**: 257

- Heat of formation, **5**: 193

- Magnetic susceptibility, **6**: 358

- Photoelectric current, **6**: 68

- Refractive index, aqueous solution, **7**: 71

- Solubility in water, **4**: 226

- Specific heat, aqueous solution, **5**: 123

- Viscosity, aqueous solution, **5**: 14

- X-ray diffraction data, **1**: 343

-Chromyl chloride

- Boiling point elevation, **3**: 329

-Molybdenum trioxide

- Refractive index, aqueous solution, **7**: 96

-Sulfur trioxide

- Density, aqueous solution, **3**: 96

Chromium tungsten steels

- Thermal expansion, **2**: 472

Chromium vanadium steels

- Analyses, table of, **2**: 486

- Density, **2**: 517

- Endurance limits, **2**: 603, 605, 606

- Mechanical tests, **2**: 509

- Thermal expansion, **2**: 472

Chromous chloride

Ammines

- Decomposition pressure, **7**: 286

- Heat of decomposition, **7**: 286

- Heat of formation, **5**: 193

- Heat of formation, **5**: 193

- Magnetic susceptibility, **6**: 358

- Aqueous solution, **6**: 364

- Transition temperature, **4**: 7

- Vapor pressure, aqueous solution, **3**: 367

Chromous hydroxide

- Magnetic susceptibility, **6**: 358

- Aqueous solution, **6**: 364

Chromous sulfate

- Magnetic susceptibility, **6**: 358

- Aqueous solution, **6**: 364

Chromous sulfide

- Magnetic susceptibility, **6**: 358

Chromyl chloride

- Boiling point, **3**: 329

- Density, **3**: 23

- Dielectric constant, **6**: 77

- Heat of formation, **5**: 193

- Vapor pressure, **3**: 214

- Carbon disulfide*

- Carbon tetrachloride*

- Chromium trioxide*

Chronin alloy

- Thermoelectric properties, **6**: 222

Chrysene

- Absorption spectra, **5**: 352

- Heat of combustion, **5**: 164

- Magnetic susceptibility, **6**: 364

- Photoconductivity, **6**: 66

- Anthracene*

- Anthracene*-Carbazole

- Carbazole*

- Ethyl ether

- Solubility, mutual, **3**: 396

- Phenanthrene

- Freezing point-solubility, **4**: 163

Chrysite (alloy), **2**: 374; cf. 555, 602**Chrysoberyl**

- Density, **1**: 141

- Refractive index, **1**: 141, 172; **7**: 23

- Specific heat, **5**: 98

- Thermal expansion, **3**: 43

Chrysoidine, magnetic susceptibility, **6**: 363**Chrysokalk (alloy)**, **2**: 374; cf. 469, 602**Chrysolite**, refractive index, **7**: 23**Chrysorin (alloy)**, **2**: 374; cf. 555, 601**Chrysotile**

- Density, **1**: 142

- Refractive index, **1**: 142, 170

Churchite

- Density, **1**: 146

- Refractive index, **1**: 146, 171

Cimet (alloy), **2**: 374

- Electrical conductivity, **6**: 178

Cincholoiponic acid

- Optical rotatory power, **7**: 466

Cinchonine

- Acetone*

- Ethyl alcohol

- Density, **3**: 161

Cinchonidine

- Absorption spectra, **5**: 334, 353

- Crystallography, **1**: 335

- Optical rotatory power, **7**: 469, 470

Cinchonidine sulfate

- Crystallography, **1**: 335

- Solubility in water, **4**: 219

Cinchonine

- Absorption spectra, ultra-violet, **5**: 353, 365, 369, 372

- Crystallography, **1**: 335

- Electrical conductivity, aqueous solution, **6**: 301

- Intramolecular transformation, **7**: 119

- Optical rotatory power, **7**: 469

- Ammonia*

Cinchonine.—(Continued)

-Ethyl alcohol

- Freezing point-solubility in water, **4**: 406

Cinchonine antimonyl tartrate

- Optical rotatory power, **7**: 354

Cinchonine hydrochloride

- Absorption spectra, ultra-violet, **5**: 365

- Crystallography, **1**: 335

Cinchonine hydrogen tartrate, boiling point elevation in aqueous solution, **3**: 328

Cinchoninic acid

- Absorption spectra, ultra-violet, **5**: 369

Cinchotoxine

- Absorption spectra, ultra-violet, **5**: 369

-Acetone*

-Ethyl alcohol

- Density, **7**: 82

- Refractive index, **7**: 82

Cineole

- Absorption spectra, **5**: 347

- Azeotropic mixtures, **3**: 321

- Birefringence, magnetic, **7**: 111

- Cryoscopic constant, **4**: 184

- Solubility in water, **3**: 392

- Viscosity, **7**: 223

- Aminophenol (*o*-, *m*-)*

- Catechol*

- Guaiacol

- Freezing point-solubility, **4**: 152

- Hydroquinol

- Freezing point-solubility, **4**: 140

- Hydroxybenzoic acid (*m*-, *p*-)

- Freezing point-solubility, **4**: 149

- Methyl salicylate

- Freezing point-solubility, **4**: 153

- Naphthol (α -, β -)

- Freezing point-solubility, **4**: 156

- Naphthyl salicylate

- Freezing point-solubility, **4**: 160

- Nitrophenol (*o*-, *m*-, *p*-)

- Freezing point-solubility, **4**: 129–132

- Phenol

- Freezing point-solubility, **4**: 137

- Phenyl salicylate

- Freezing point-solubility, **4**: 160

- Resorcinol

- Freezing point-solubility, **4**: 139

- Salicylic acid

- Freezing point-solubility, **4**: 149

- Thymol

- Freezing point-solubility, **4**: 158

Cineolic acid

- Crystallography, **1**: 330

- Electrical conductivity, aqueous solution, **6**: 296

- Optical rotatory power, **7**: 417

Cinnabarite

- Density, **1**: 121

- Refractive index, **1**: 121, 168

- Sublimation temperature, **1**: 121, 163

- See also Mercuric sulfide.

Cinnamaldehyde

- Absorption spectra, **5**: 344

- Emission, spectral, **5**: 257

- Magnetic susceptibility, **6**: 363

- Refractive index, **7**: 45

- Verdet constant, **6**: 430

- Anethole*

- Carbon disulfide*

- Diethyl tartrate

- Density, **3**: 192

- Ethyl alcohol

- Density, **3**: 161

- Isobutyl dibenzoyl-*d*-tartrate

- Density, **3**: 193

Cinnamic acid

- Absorption spectra, ultra-violet, **5**: 344, 367

- Cryoscopic constant, **4**: 183

* Data for system will be found under this compound in Index. Full explanation on page vii.

Cinnamic acid.—(Continued)

- Electrical conductivity, aqueous solution, **6**: 290
- Esterification constant, **7**: 138
- Heat of combustion, **5**: 165
- Heat of fusion, **5**: 134
- Photochemical reactions, **7**: 165, 169
- Solubility in water, **4**: 253
- Benzoic acid*
- Camphor*
- Catechol*
- Chloroacetic acid*
- Dichloroacetic acid
 - Freezing point-solubility, **4**: 105
- Dimethylpyrone
 - Freezing point-solubility, **4**: 151
- 2, 4-Dinitrophenol
 - Freezing point-solubility, **4**: 126
- Ethyl alcohol
 - Heat of solution, **5**: 152
- Formic acid
 - Boiling point elevation, **3**: 333
- Hydrogen chloride
 - Freezing point-solubility in water, **4**: 397
- Hydroquinol
 - Freezing point-solubility, **4**: 140
- Isoamyl acetate
 - Density, **3**: 189
 - Viscosity, **5**: 50
- Isoamyl alcohol
 - Boiling point elevation, **3**: 343
- Methyl alcohol
 - Density, **3**: 151
 - Heat of solution, **5**: 152
 - Viscosity, **5**: 34
- Naphthol (α -, β -)
 - Freezing point-solubility, **4**: 154
- Nitrophenol (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 129–131
- Phenol
 - Freezing point-solubility, **4**: 136
- Picric acid
 - Freezing point-solubility, **4**: 120
- Propyl alcohol
 - Heat of solution, **5**: 153
- Pyrogallol
 - Freezing point-solubility, **4**: 141
- Resorcinol
 - Freezing point-solubility, **4**: 139
- Sodium cinnamate
 - Freezing point-solubility in water, **4**: 421
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 103
- Xylene
 - Distribution coefficients in water, **3**: 431

Cinnamic anhydride

- Heat of combustion, **5**: 166
- Heat of fusion, **5**: 134

Cinnamyl alcohol

- Magnetic susceptibility, **6**: 363
- Refractive index, **7**: 46
- Verdet constant, **6**: 430
- Methyl alcohol
 - Density, **3**: 151

Cinnamylideneacetic acid

- Absorption spectra, **5**: 347
- Heat of combustion, **5**: 166

Cinnamylideneacetone

- Absorption spectra, **5**: 348
- Isoamyl acetate
 - Density, **3**: 190
 - Viscosity, **5**: 50

Cinnamylideneacetophenone

- Absorption spectra, **5**: 352
- Acenaphthene*
- Azobenzene*
- Diphenylamine
 - Freezing point-solubility, **4**: 161

Cinnamylideneacetophenone.—(Continued)

- Isoamyl acetate
 - Density, **3**: 190
 - Viscosity, **5**: 50
- β -Naphthyl ethyl ether
 - Freezing point-solubility, **4**: 161
- 2, 4, 6-Trinitrotoluene
 - Freezing point-solubility, **4**: 146
- Cinnamylideneaniline**
 - Magnetic susceptibility, **6**: 364
- Benzalazine*
- Dibenzylhydrazine
 - Freezing point-solubility, **4**: 164
- Diphenylbutadiene
 - Freezing point-solubility, **4**: 164
- Diphenyldiacetylene
 - Freezing point-solubility, **4**: 164
- Cinnamylidenemalonic acid**
 - Absorption spectra, **5**: 348
 - Heat of combustion, **5**: 166
- Cinnamylidene- β -naphthylamine**
 - Diphenylbutadiene
 - Freezing point-solubility, **4**: 164
- Citraconic acid**
 - Absorption spectra, **5**: 337
 - Density, aqueous solution, **3**: 114
 - Electrical conductivity, aqueous solution, **6**: 269
 - Heat of combustion, **5**: 165
 - Heat of solution in water, **5**: 149
 - Verdet constant, **6**: 428
 - Methyl alcohol
 - Viscosity, **5**: 34
- Citraconic anhydride**
 - Absorption spectra, **5**: 332
 - Dielectric constant, **6**: 88
 - Electrical conductivity, **6**: 144
 - Refractive index, **7**: 36
 - Verdet constant, **6**: 428
- Citral**
 - Absorption spectra, ultra-violet, **5**: 347, 374
 - Magnetic susceptibility, **6**: 363
 - Refractive index, **7**: 55
- Citric acid**
 - Absorption spectra, **5**: 340
 - Boiling point elevation in aqueous solution, **3**: 327
 - Crystallography, **1**: 326
 - Density, aqueous solution, **3**: 112, 114; **7**: 69
 - Dielectric constant, **6**: 100
 - Diffusion in water, **5**: 71
 - Electrical conductivity, aqueous solution, **6**: 275
 - Freezing point lowering of aqueous solution, **4**: 263
 - Heat of combustion, **5**: 165
 - Heat of solution in water, **5**: 150
 - Refractive index, **7**: 29
 - Aqueous solution, **7**: 69
 - Solubility in water, **4**: 253
 - Specific heat, aqueous solution, **5**: 125
 - Surface tension, aqueous solution, **4**: 469
 - Vapor pressure lowering in aqueous solution, **3**: 293
- Acetone*
- Ammonium citrate*
- Ammonium hydroxide*
- Amyl acetate*
- Caffeine*
- Chloroform*
- Ethyl acetate
 - Density, **3**: 166
- Ethyl alcohol
 - Density, **3**: 160
 - Aqueous solution, **3**: 127; **4**: 405
 - Freezing point-solubility in water, **4**: 405
 - Heat of solution, **5**: 152

Citric acid.—(Continued)

- Ethyl ether
 - Density, **3**: 168
 - Distribution coefficients in water, **3**: 428
- Hydrogen chloride
 - Freezing point-solubility in water, **4**: 396
- Isoamyl alcohol
 - Density, **3**: 173
- Mercuric chloride
 - Freezing point-solubility in water, **4**: 417
- Molybdenum trioxide
 - Density, aqueous solution, **3**: 102
 - Refractive index, aqueous solution, **7**: 94
- Phosphoric acid-Sodium hydroxide
 - Freezing point-solubility in water, **4**: 425
- Potassium citrate
 - Density, aqueous solution, **3**: 103
- Sodium citrate
 - Density, aqueous solution, **3**: 102
- Sodium hydroxide
 - Refractive index, aqueous solution, **7**: 95
- Sulfuric acid
 - Freezing point-solubility in water, **4**: 398
- Citronellal**
 - Absorption spectra, **5**: 347
 - Optical rotatory power, **7**: 402
 - Verdet constant, **6**: 426
 - Dispersion, **6**: 433
- Citronellol**, optical rotatory power, **7**: 402
- Clark cell**, **6**: 314
- Clark's patent** (alloy), **2**: 374
- Claudetite**
 - Density, **1**: 110
 - Refractive index, **1**: 110, 173
 - See also Arsenous oxide.
- Clausthalite**
 - Density, **1**: 115
 - Melting point, **1**: 115
 - See also Lead selenide.
- Clay brick**
 - Specification and properties, **2**: 64
- Clay tile**, sound, transmission of, by, **6**: 459
- Clays**
 - Colloidal, effect on rubber, **2**: 287
 - Dehydration curves, **2**: 62
 - Density, **2**: 57, 58
 - Fire shrinkage, **2**: 58, 60, 61
 - Fusion points, **2**: 61
 - Heat absorption and evolution, **2**: 63
 - Heat of wetting, **5**: 142, 143
 - Heating curves, **2**: 61, 62
 - Hygroscopicity, **2**: 324
 - Modulus of rupture, effect of firing on, **2**: 57
 - Physical properties, **2**: 56
 - Thermal reactions, **2**: 61
 - Water ratios, **2**: 61
 - X-ray diffraction data, **2**: 357
- Clebrum** (alloy), **2**: 374
- Clichier metal**, **2**: 374
- Climax** (alloy), **2**: 374, 482
 - Electrical conductivity, **6**: 185
- Clinoclasite**
 - Density, **1**: 123
 - Refractive index, **1**: 123, 173
- Clinoenstatite**
 - Density, **1**: 142
 - Melting point, **1**: 142
 - Refractive index, **1**: 142, 172
 - See also Magnesium metasilicate.
- Clinohedrite**
 - Density, **1**: 144
 - Refractive index, **1**: 144, 172

* Data for system will be found under this compound in Index. Full explanation on page vii.

Clinohumite

Density, 1: 142
Refractive index, 1: 142, 172

Clinozoisite

Density, 1: 146
Refractive index, 1: 146, 172; 7: 25

Cloth

Black bias
Density, 2: 315
Thermal conductivity, 2: 315
Emission, spectral, 5: 244
Heat retaining value, 2: 238
Sound, velocity of, in, 6: 465
Strength, moisture, effect of, 2: 238
Tensile strength, steaming, effect of, 2: 238

Coal

Ash fusibility, 2: 135
Calorific value, 2: 135
Classification, 2: 131
Composition, 2: 131, 132
Density, 2: 135
Ignition temperature, 2: 135
Oxidation, 2: 135
Sulfur content, 2: 135
Thermal diffusivity, 2: 315

Coal dust

Density, 2: 313
Thermal conductivity, 2: 313

Coal gas

Explosion, turbulence, effect of, 2: 195
Sound, velocity of, in, 6: 463

Coal tar distillates, 2: 160**Coal tar oils, heat of vaporization, 2: 172****Coal tar pitches. See Pitches.****Coal tars. See Tars.****Cobalt**

Absorption, index of, 5: 249
Boiling point, 1: 102; 3: 205
Cathodoluminescence, 5: 390
Compressibility, 3: 46, 48
Critical potentials, 6: 70
Corbino effect, 6: 419
Curie point, 6: 410
Decomposition pressure of complex hydrates and ammines, 7: 282
Density, 1: 104; 2: 456
Electrical conductivity, 1: 104; 6: 136, 137, 138
Low temperature, 6: 127, 132
Magnetic field, effect of, 6: 423
Electrode potential, 6: 319; 7: 279
Electronic structure, normal and excited, 6: 70
Emission, spectral, 5: 242, 253
Emission spectra, 5: 288
Ettingshausen effect, 6: 419
Hall effect, 6: 416, 417, 418
Hardness, 2: 592
Heat of fusion, 1: 104
Heat of transition, 5: 191
Heat of vaporization, 1: 102
Isotopes, 1: 45
Joule effect, 6: 440
Kerr constant, 6: 435
Magnetic moment, 6: 346
Magnetic properties, 6: 376, 402
Magnetization by rotation, 6: 347
Melting point, 1: 54, 104
Nernst effect, 6: 420, 421
Persistent lines, 5: 323
Quantum numbers, 5: 408
Refraction, index of, 5: 249
Righi-Leduc effect, 6: 421
Rotation by magnetization, 6: 347
Solution velocity in dissolved iodine, 5: 57
Sound, velocity of, in, 6: 465
Specific heat, 1: 104
Liquid, 5: 94
Solid, 5: 93

Cobalt.—(Continued)

Spectral series, 5: 397
Tensile properties, 2: 592
Thermal conductivity, 5: 220
Thermal expansion, 1: 104; 2: 460
Thermochemistry, 5: 191
Thermoelectric properties, 6: 214, 225, 226
Vapor pressure, 3: 205
Water vapor, reaction with, 7: 279
X-ray absorption limits, 6: 37
X-ray crystal structure, 1: 340
X-ray emission spectra, 6: 37
X-ray series, limiting frequencies, 6: 35
X-rays, absorption coefficient, 6: 13, 14
X-rays, emission efficiency, 6: 11
Zeeman effect, 5: 420
-Aluminum*
-Antimony*
-Antimony*-Iron
-Arsenic*
-Bismuth*
-Boron*
-Carbon*-Iron-Manganese-Silicon
-Chromium*
-Chromium*-Nickel
-Copper
Electrical conductivity, 6: 167
Equilibrium diagram, 2: 431
Thermoelectric properties, 6: 218
-Copper-Iron-Nickel-Zinc
Electrical conductivity, 6: 169
-Copper-Tin
Volume change on solidification, 2: 476
-Gold
Equilibrium diagram, 2: 424
-Graphite
Freezing point-solubility 4: 41
-Iron
Curie point, 6: 391
Electrical conductivity, 6: 167, 178
Equilibrium diagram, 2: 450
Joule effect, 6: 440
Magnetic moment, 6: 346
Magnetic properties, 6: 376, 391, 393
Magnetization by rotation, 6: 347
Thermal conductivity, 5: 224
Thermoelectric properties, 6: 219
X-ray diffraction data, 1: 351
Young's modulus, 2: 478
-Iron-Nickel
Electrical conductivity, 6: 167, 193
-Lead
Equilibrium diagram, 2: 414
-Manganese
Equilibrium diagram, 2: 431
-Molybdenum
Equilibrium diagram, 2: 431
-Nickel
Density, 2: 594
Electrical conductivity, 6: 167
Equilibrium diagram, 2: 431
Magnetic properties, 6: 405, 406
Magnetization by rotation, 6: 347
Thermoelectric properties, 6: 219
-Phosphorus
Density, 2: 594
Freezing point-solubility, 4: 29
-Silicon
Density, 2: 594
Equilibrium diagram, 2: 431
Kerr constant, 6: 436
-Sulfur
Freezing point-solubility, 4: 25
-Tin
Kerr constant, 6: 436
Specific heat, 5: 120
-Tungsten
Hardness, 2: 593
-Zinc
Equilibrium diagram, 2: 432

Cobalt ammines, freezing point lowering of aqueous solution, 4: 256**Cobalt ammonia complex ions**

Electrode potentials, 7: 281-282

Cobalt arsenic sulfide

X-ray diffraction data, 1: 343

Cobalt arsenide

-Nickel arsenide

Freezing point-solubility, 4: 61

Cobalt carbonyl, vapor pressure, 3: 208**Cobalt steel, magnetic properties, 6: 376, 386, 387, 391, 393****Cobaltchrome (alloy), 2: 374****Cobaltic chloride, vapor pressure lowering in aqueous solution, 3: 294****Cobalt ferrite**

Kerr constant, 6: 435

Cobaltic hydroxide

Heat of formation, 5: 191

Cobaltic oxide

Albedo, 5: 263
Decomposition pressure, 7: 282
Electrons, thermal emission of, 6: 54
Magnetic susceptibility, 6: 358
Thermal conductivity, 5: 216
Thermionic work function, 6: 54

Cobaltic potassium cyanide

Absorption spectra, solutions, 5: 331

Cobaltic sulfide, heat of formation, 5: 191**Cobaltite**

Compressibility, 3: 50
Density, 1: 131
Specific heat, 5: 98
Thermal expansion, 3: 45

Cobalto-cobaltic oxide

Decomposition pressure, 7: 282
Emission, spectral, 5: 242
Heat of formation, 5: 191
Magnetic susceptibility, 6: 358
Thermoelectric power, 6: 224

Cobaltous acetate

Ammine, decomposition pressure, 7: 282
Crystallography, 1: 321
Density, 1: 131
Aqueous solution, 3: 69
Electrical conductivity, aqueous solution, 6: 245
Freezing point lowering of aqueous solution, 4: 256
Refractive index, 1: 131, 170

Cobaltous benzoate

Ammine, decomposition pressure, 7: 282

Cobaltous bromide

Absorption spectra, 5: 327, 328

Ammines

Decomposition pressure, 7: 280
Heat of decomposition, 7: 280
Heat of formation, 5: 192

Boiling point elevation in aqueous solution, 3: 325

Density, aqueous solution, 3: 69

Electrical conductivity, aqueous solution, 6: 234, 239

Ethylamine complex

Decomposition pressure, 7: 280
Heat of decomposition, 7: 280

Freezing point lowering of aqueous solution, 4: 256

Heat of formation, 5: 191

Magnetic susceptibility, 6: 358

Aqueous solution, 6: 364

Methylamine complex

Decomposition pressure, 7: 280
Heat of decomposition, 7: 280

Refractive index, aqueous solution, 7: 71

Dispersion, 7: 100

Solubility in water, 4: 225

Transference number, 6: 310

-Formamide

Viscosity, 5: 29

Cobaltous bromide.—(Continued)

- Methyl acetate*
Boiling point elevation, **3**: 340
Density, **3**: 140
- Pyridine*
Boiling point elevation, **3**: 342
- Quinoline*
Boiling point elevation, **3**: 347
- Cobaltous carbonate**
See Sphero-cobaltite.
- Potassium chloride-Potassium bicarbonate*
Freezing point-solubility in water, **4**: 298
- Cobaltous chlorate**
Density, aqueous solution, **3**: 69, 104
Electrical conductivity, aqueous solution, **6**: 244, 254
Freezing point lowering of aqueous solution, **4**: 256
Refractive index, aqueous solution, **7**: 71
Dispersion, **7**: 100
Solubility in water, **4**: 225
- Cobaltous chloride**
Absorption spectra, solutions, **5**: 327, 328
Ammines
Decomposition pressure, **7**: 280
Heat of decomposition, **7**: 280
Heat of formation, **5**: 192
Boiling point elevation in aqueous solution, **3**: 325
Decomposition pressure of hydrate, **7**: 280
Density, aqueous solution, **3**: 69, 107
Diffusion in water, **5**: 66
Electrical conductivity, aqueous solution, **6**: 231, 233
Ethylamine complex
Decomposition pressure, **7**: 280
Heat of decomposition, **7**: 280
Freezing point lowering of aqueous solution, **4**: 256
Heat of formation, **5**: 191
Hydrolysis constant, **7**: 279
Magnetic susceptibility, **6**: 358
Aqueous solution, **6**: 364
Methylamine complex
Decomposition pressure, **7**: 280
Heat of decomposition, **7**: 280
Refractive index, aqueous solution, **7**: 71
Dispersion, **7**: 100
Solubility in water, **4**: 225
Specific heat, aqueous solution, **5**: 123
Transference number, **6**: 310
Vapor pressure, aqueous solution, **3**: 367
Vapor pressure lowering in aqueous solution, **3**: 294
Verdet constant, aqueous solution, **6**: 428
Viscosity, aqueous solution, **5**: 14
X-rays, absorption coefficient, **6**: 13
- Acetone**
- Aluminum chloride**
- Ammonium chloride**
- Amyl alcohol**
- Barium chloride**
- Bismuth chloride**
- Cadmium chloride**
- Calcium chloride**
- Calcium chloride-Ethyl alcohol*
- Cesium chloride**
- Cobaltous nitrate-Cobaltous sulfate*
Refractive index, aqueous solution, **7**: 98
- Cobaltous sulfate*
Refractive index, aqueous solution, **7**: 96
- Ethyl alcohol*
Boiling point elevation, **3**: 337
Magnetic susceptibility, **6**: 364

Cobaltous chloride.—(Continued)

- Ethyl alcohol-Glycerol*
Viscosity, **5**: 30
- Ethyl alcohol-Mercuric chloride*
Boiling point elevation, **3**: 349
- Glycerol*
Viscosity, aqueous solution, **5**: 24
- Glycerol-Methyl alcohol*
Viscosity, **5**: 30
- Hydrogen chloride*
Density, aqueous solution, **3**: 95
Freezing point-solubility in water, **4**: 309
Viscosity, aqueous solution, **5**: 18
- Lithium chloride*
Density, aqueous solution, **3**: 98
Viscosity, aqueous solution, **5**: 19
- Magnesium chloride*
Boiling point elevation in aqueous solution, **3**: 348
Density, aqueous solution, **3**: 98
Viscosity, aqueous solution, **5**: 19
- Manganous chloride*
Freezing point-solubility in water, **4**: 307, 386
- Mercuric chloride*
Boiling point elevation in aqueous solution, **3**: 347
- Methyl alcohol*
Boiling point elevation, **3**: 334
Magnetic susceptibility, **6**: 364
- Piperidine*
Boiling point elevation, **3**: 343
- Potassium bicarbonate-Potassium carbonate*
Freezing point-solubility in water, **4**: 298
- Potassium chloride*
Density, aqueous solution, **3**: 98
Freezing point-solubility in water, **4**: 309
Vapor pressure, aqueous solution, **5**: 19
- Pyridine*
Boiling point elevation, **3**: 342
Freezing point-solubility, **4**: 200
- Rubidium chloride*
Freezing point-solubility in water, **4**: 309
- Quinoline*
Boiling point elevation, **3**: 347
- Sodium chloride*
Boiling point elevation in aqueous solution, **3**: 348
Density, aqueous solution, **3**: 98
Freezing point-solubility in water, **4**: 309
Viscosity, aqueous solution, **5**: 19
- Stannous chloride*
Boiling point elevation in aqueous solution, **3**: 347
- Zinc chloride*
Boiling point elevation in aqueous solution, **3**: 347
- Cobaltous cuprous sulfate**
Magnetic susceptibility, **6**: 358, 364
- Cobaltous dihydrogen sulfate**
Magnetic susceptibility, **6**: 358
- Cobaltous dithionate**, ammine, decomposition pressure, **7**: 281
- Cobaltous fluoride**
Absorption spectra, solutions, **5**: 327, 328
Heat of formation, **5**: 191
Magnetic susceptibility, **6**: 358
Aqueous solution, **6**: 364
- Cobaltous fluosilicate**
Density, **1**: 131
Refractive index, **1**: 131, 168
- Cobaltous formate**, ammines, decomposition pressure, **7**: 282

Cobaltous hydrogen fluoride

- Refractive index, **7**: 22
- Cobaltous hydroxide**
Heat of formation, **5**: 191
- Cobaltous hypophosphite**
Ammine, decomposition pressure, **7**: 282
- Cobaltous iodate**
Solubility in water, **4**: 225, 246
- Cobaltous iodide**
Absorption spectra, solutions, **5**: 327, 328
Ammines
Decomposition pressure, **7**: 280
Heat of decomposition, **7**: 280
- Ethylamine complex**
Decomposition pressure, **7**: 281
Heat of decomposition, **7**: 281
Heat of formation, **5**: 191
Magnetic susceptibility, **6**: 358
Aqueous solution, **6**: 364
- Methylamine complex**
Decomposition pressure, **7**: 281
Heat of decomposition, **7**: 281
Solubility in water, **4**: 225
- Cobaltous mercuric bromide**
Heat of formation, **5**: 192
- Cobaltous naphthalene-1, 5-disulfonate**
Crystallography, **1**: 321
Density, **1**: 131
Refractive index, **1**: 131, 171
- Cobaltous naphthalenesulfonate**
Ammine, decomposition pressure, **7**: 282
- Cobaltous nitrate**
Absorption spectra, solutions, **5**: 327, 328
Ammine, decomposition pressure, **7**: 281
Density, aqueous solution, **3**: 69, 104, 107
Electrical conductivity, **6**: 148
Aqueous solution, **6**: 237, 240
Freezing point lowering of aqueous solution, **4**: 256
Heat of formation, **5**: 192
Heat of fusion, **5**: 131
Hydrolysis constant, **7**: 279
Magnetic susceptibility, **6**: 358
Aqueous solution, **6**: 364
Refractive index, aqueous solution, **7**: 71
Dispersion, **7**: 100
Solubility in water, **4**: 225
Specific heat, **5**: 98
Vapor pressure lowering in aqueous solution, **3**: 294
Verdet constant, aqueous solution, **6**: 428
Viscosity, aqueous solution, **5**: 14
- Acetone**
- Cobaltous chloride-Cobaltous sulfate*
- Ferric nitrate*
Refractive index, aqueous solution, **7**: 96
- Methyl acetate*
Boiling point elevation, **3**: 340
- Neodymium nitrate*
Freezing point-solubility in water, **4**: 363
- Praseodymium nitrate*
Freezing point-solubility in water, **4**: 363
- Cobaltous oxide**
Heat of formation, **5**: 191
Magnetic susceptibility, **6**: 358
Reduction with hydrogen, **7**: 279
X-ray diffraction data, **1**: 343
- Aluminum oxide**
- Silica*
Freezing point-solubility, **4**: 85
- Zinc oxide*
Density, **3**: 134
- Cobaltous perchlorate**
Ammine, decomposition pressure, **7**: 280
Decomposition pressure of hydrate, **7**: 280

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Cobaltous perchlorate.**—(*Continued*)
 Density, aqueous solution, **3**: 104
 Freezing point lowering of aqueous solution, **4**: 256
 Melting point, **1**: 130
 Refractive index, **1**: 130, 165
 Solubility in water, **4**: 225
- Cobaltous potassium selenate**
 Density, **1**: 157
 Refractive index, **1**: 157, 169; **7**: 31
- Cobaltous potassium sulfate**
 Density, **1**: 157
 Dielectric constant, **6**: 99
 Hydrate
 Decomposition pressure, **7**: 308
 Heat of decomposition, **7**: 308
 Magnetic susceptibility, **6**: 360, 364
 Refractive index, **1**: 157, 168; **7**: 31
 Solubility in water, **4**: 242
- Cobaltous rubidium selenate**
 Refractive index, **7**: 31
- Cobaltous rubidium sulfate**
 Density, **1**: 160
 Hydrate
 Decomposition pressure, **7**: 310
 Heat of decomposition, **7**: 310
 Magnetic susceptibility, **6**: 360
 Refractive index, **1**: 160, 169; **7**: 31
 Solubility in water, **4**: 243
- Cobaltous selenate**
 Density, **1**: 130
 Refractive index, **1**: 130, 169
- Cobaltous selenide**
 Heat of formation, **5**: 192
- Cobaltous sodium sulfate**
 Solubility in water, **4**: 238
- Cobaltous sulfide**
See Syepoorite.
- Cobaltous sulfate**
 Absorption spectra, solutions, **5**: 327, 328
 Ammines
 Decomposition pressure, **7**: 281
 Heat of decomposition, **7**: 281
 Boiling point elevation in aqueous solution, **3**: 325
 Decomposition pressure of hydrates, **7**: 281
 Density, aqueous solution, **3**: 69, 107
 Electrical conductivity, aqueous solution, **6**: 236
 Freezing point lowering of aqueous solution, **4**: 256
 Heat of formation, **5**: 191
 Magnetic susceptibility, **6**: 358, 364
 Aqueous solution, **6**: 364
 Reflectivity, selective, **5**: 260
 Refractive index, aqueous solution, **7**: 71
 Solubility in water, **4**: 225
 Solution velocity in water, **5**: 56
 Specific heat, **5**: 98
 Surface tension, aqueous solution, **4**: 465
 Vapor pressure, aqueous solution, **3**: 367
 Vapor pressure lowering in aqueous solution, **3**: 294
 Verdet constant, aqueous solution, **6**: 428
 Viscosity, aqueous solution, **5**: 14
 -Cobaltous chloride*
 -Cobaltous chloride*-Cobaltous nitrate
 -Lithium sulfate
 Freezing point-solubility, **4**: 60
 -Potassium sulfate
 Freezing point-solubility, **4**: 61
 -Sodium sulfate
 Freezing point-solubility, **4**: 60, 345
- Cobaltous sulfide**
 Heat of formation, **5**: 191
 Photoelectric current, **6**: 69
 X-ray diffraction data, **1**: 343
- Cobaltous telluride**
 Heat of formation, **5**: 192
- Cobaltous thallium selenate**
 Refractive index, **7**: 31
- Cobaltous thallium sulfate**
 Refractive index, **7**: 31
- Cobaltous thiocyanate**
 Density, aqueous solution, **3**: 69
 Freezing point lowering of aqueous solution, **4**: 256
 Viscosity, aqueous solution, **5**: 14
 -Ethyl alcohol
 Boiling point elevation, **3**: 337
- Cocaine**
 Absorption spectra, **5**: 352
 Dielectric constant, **6**: 96
 Optical rotatory power, **7**: 432
- Cocaine hydrochloride**
 Absorption spectra, **5**: 334, 365, 367-368
 Crystallography, **1**: 334
 Optical rotatory power, **7**: 432
- Cocaine, optical rotatory power, 7: 396**
- Codeine**
 Absorption spectra, **5**: 334, 353
 Crystallography, **1**: 335
 Heat of combustion, **5**: 168
 Optical rotatory power, **7**: 468
 Refractive index, **7**: 30
- Coercive force, definition, 6: 369**
- Coffee husks, thermal conductivity, 2: 313**
- Coinage bronze, 2: 374; cf. 561**
- Coke**
 Combustibility, **2**: 136
 Composition, **2**: 134
 Density, **2**: 135
 Moisture content at various humidities, **2**: 325
 Porosity, **2**: 135
 Thermal conductivity, **2**: 304
 Thermal expansion, **2**: 303
- Coke dust**
 Density, **2**: 314
 Thermal conductivity, **2**: 314
- Colamine**
 Absorption spectra, ultra-violet, **5**: 366
- Colchicine**
 -Acetic acid*
 -Ethylene bromide
 Boiling point elevation, **3**: 335
- Colchicine**
 -Acetic acid*
 -Ethylene bromide
 Boiling point elevation, **3**: 335
- Colemanite**
 Density, **1**: 145
 Refractive index, **1**: 145, 171; **7**: 25
- Colerainite**
 Density, **1**: 142
 Refractive index, **1**: 142, 166
- Collagen, hydrolysis to gelatin, 2: 229**
- Collet brass, 2: 374; cf. 602**
- Collodion, emission, spectral, 5: 258**
- Colloids, 1: 354**
 Dielectric constant, **6**: 105
 Diffusion in water, **5**: 71
 Heat of wetting, **5**: 143
 Osmotic pressure, **4**: 430, 431
 Precipitation laws, **1**: 354
 Solubility of gases in, **3**: 281
 X-ray diffraction data, **2**: 357
- Color filters, 1: 60; 5: 264, 271**
- Color temperature, 5: 246**
- Colorado metal, 2: 374; cf. 475, 480**
- Colors**
 Complementary, **1**: 93
 Stable, **1**: 93
- Columbia, weights and measures, 1: 4**
- Columbite, electrical conductivity, 6: 154**
- Columbium**
 Absorption, index of, **5**: 249
 Boiling point, **1**: 102
 Cathodoluminescence, **5**: 389
 Density, **1**: 104
- Columbium.**—(*Continued*)
 Emission, spectral, **5**: 242
 Emission spectra, **5**: 285
 Magnetic susceptibility, **6**: 354
 Melting point, **1**: 104
 Persistent lines, **5**: 323
 Quantum numbers, **5**: 408
 Refraction, index of, **5**: 249
 Spectral series, **5**: 396
 X-ray absorption limits, **6**: 38
 X-ray emission spectra, **6**: 37
 X-ray series, limiting frequencies, **6**: 35
 Zeeman effect, **5**: 420
- Columbium carbide**
 X-ray diffraction data, **1**: 343
- Columbium nitride**
 X-ray diffraction data, **1**: 343
- Columbium oxide**
 Emission, spectral, **5**: 242
 Luminescence, **5**: 389, 390
 -Tantalum oxide
 Density, **3**: 134
- Columbium pentachloride**
 Electrical conductivity, **6**: 148
- Columbium pentafluoride**
 -Hydrogen fluoride-Potassium fluoride
 Freezing point-solubility in water, **4**: 274
- Columbium pentoxide**
 Magnetic susceptibility, **6**: 359
 Specific heat, **5**: 98
- Colza oil, magnetic susceptibility, 6: 364**
- Combustion, heat of, 5: 162**
- Combustion calorie, 5: 162**
- Comet (alloy), 2: 374**
 Electrical conductivity, **6**: 185
- Compressibility, 3: 1**
 Building stones, **2**: 54
 Chemical compounds, **3**: 49
 Conversion factors, **1**: 24
 Elements, **3**: 35, 46
 Gases, **3**: 3, 17, 435
 Glass, **2**: 93
 Liquids and vitreous solids, **3**: 35, 40
 Metals, **3**: 46
 Minerals, **3**: 49
 Oils, fats and waxes, **2**: 208
 Petroleum, **2**: 146
 Porcelain, electrical, **2**: 68
 Rocks, **3**: 49
 Rubber, **2**: 269
 Solutions, **3**: 439
 Woods, **2**: 1
- Compression**
 Heat of, **5**: 144
 Modulus of, conversion factors, **1**: 24
- Compressive strength**
 Building stones, **2**: 47
 Definition, **2**: viii
- Compton effect, 6: 17**
- Compton formula (scattering function), 6: 19**
- Concentration**
 Definition, **1**: 35
 Mass, conversion factors, **1**: 23
 Volume, conversion factors, **1**: 23
- Concentration cells**
 Electromotive force, **6**: 321
 Non-aqueous solutions, **6**: 329
 Salt bridges, **6**: 330
- Concrete**
 Aggregates for, **2**: 121
 Density, **2**: 119, 314
 Magnesia, **2**: 124
 Modulus of elasticity, **2**: 119
 Poisson's ratio, **2**: 119
 Setting time, **2**: 120
 Strength, **2**: 118
 Curing conditions and, **2**: 120
 Thermal conductivity, **2**: 119, 314
 Thermal diffusivity, **2**: 120

* Data for system will be found under this compound in Index. Full explanation on page vii.

Concrete.—(Continued)

- Thermal expansion, **2**: 119
- Volume change, time rate of, **2**: 120
- Weathering, **2**: 120
- Condensation, velocity of, **5**: 53
- Condensite, **2**: 298
- Confectionery industry
 - Air conditioning in, **2**: 322
- Concunonine
 - Optical rotatory power, **7**: 477
- Condenser transmitter, **6**: 455
- Conglomerate
 - Compressive strength, **2**: 48
 - Thermal conductivity, **2**: 55
- Congo red, Na salt
 - Absorption spectra, **5**: 356
 - Electrical conductivity, aqueous solution, **6**: 250
- α -Coniceine, optical rotatory power, **7**: 475
- Coniine
 - Absorption spectra, **5**: 333, 344
 - Electrical conductivity, aqueous solution, **6**: 289
 - Heat of combustion, **5**: 168
 - Optical rotatory power, **7**: 407
 - Refractive index, **7**: 45
- Ethyl ether
 - Distribution coefficients in water, **3**: 431
- Xylene
 - Distribution coefficients in water, **3**: 431
- Conite
 - Dielectric strength, **2**: 310
 - Tensile strength, **2**: 311
- Connarite
 - Density, **1**: 132
 - Refractive index, **1**: 132, 167
- Connellite
 - Density, **1**: 122
 - Refractive index, **1**: 122, 167
- Constant boiling mixtures, **3**: 318
- Constantan, **2**: 374, 464, 480, 601, 606
 - Annealing and forging range, **2**: 482
 - Electrical conductivity, **6**: 169, 170
 - Magnetic field, effect of, **6**: 422
 - Emission, spectral, **5**: 254
 - Endurance limits, **2**: 601, 606
 - Hall effect, **6**: 417
 - Mechanical properties, **2**: 480
 - Peltier effect, **6**: 228
 - Thermal conductivity, **5**: 224
 - Thermoelectric properties, **6**: 219, 225
 - Thomson coefficient, **6**: 228
- Constants
 - Basic, **1**: 17
 - Fundamental, **1**: 17†
- Contact potentials, **6**: 56
- Convection of heat, **5**: 234
- Conversion factors, **1**: 18
- Viscometers, **1**: 33
- Convulvulinic acid
 - Optical rotatory power, **7**: 367
- Cook's alloy, **2**: 374
- Cooper's gold, **2**: 374
- Cooper's mirror, **2**: 374
- Cooper's pen metal, **2**: 374; cf. 480, 586, 601
- Cooperite (alloy), **2**: 374
- Coordination reactions, **7**: 126
- Copal, dielectric strength, **2**: 310
- Copel (alloy), **2**: 374
 - Electrical conductivity, **6**: 169
- Copiapite
 - Density, **1**: 128
 - Refractive index, **1**: 128, 170; **7**: 22
- Copper
 - Absorption, index of, **5**: 249, 252
 - Annealed
 - Density, **1**: 28
 - Electrical conductivity, **1**: 28

Copper.—(Continued)

- Arsenical, thermal conductivity, **5**: 224
- Boiling point, **1**: 102; **3**: 205
- Brightness temperature, **1**: 60; **5**: 245
- Calorized, emission, spectral, **5**: 244
- Carbon dioxide, solubility of, in, **3**: 270
- Carbon monoxide, solubility of, in, **3**: 270
- Cathodoluminescence, **5**: 390
- Commercial, mechanical properties, **2**: 558
- Compressibility, **3**: 46, 48
- Compton effect, **6**: 18
- Condensation, irreversible, temperature of, **5**: 54
- Contact potential, **6**: 57
- Corbino effect, **6**: 419
- Critical potentials, **6**: 71
- Density
 - Liquid, **1**: 102; **2**: 463
 - Solid, **1**: 104; **2**: 456, 570
- Elastic properties, **2**: 552, 571
- Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 104; **6**: 136–139
 - Low temperature, **6**: 127, 132
 - Magnetic field, effect of, **6**: 422
 - Single crystal, **6**: 127, 135
- Electrode potential, **6**: 319; **7**: 261
- Electron emission excited by its positive ion, **6**: 65
- Electronic structure, normal and excited, **6**: 71
- Electrons, absorption of, by, **6**: 61
- Electrons, secondary emission of, **6**: 64
- Electrons, transmitted, velocity of, **6**: 62
- Electrons excited by X-rays, number of, **6**: 5
- Electrons freed by X-rays, energy of, **6**: 4
- Emission, spectral, **5**: 242, 253, 255
- Emission spectra, **5**: 291
- Endurance limits, **2**: 601, 606
- Entropy, **5**: 88
- Sublimation, **7**: 260
- Vaporization, **7**: 260
- Ettingshausen effect, **6**: 419
- Free energy
 - Fusion, **7**: 261
 - Gas, **7**: 260
 - Vaporization, **7**: 260
- Gamma rays, absorption coefficient, **6**: 14, 21
- Hall effect, **6**: 416, 417
- Hardness, **2**: 554
- Heat content, **5**: 88
- Vapor, **7**: 260
- Heat of fusion, **1**: 104; **2**: 458; **7**: 261
- Heat of plastic extension, **5**: 147
- Heat of vaporization, **1**: 102; **7**: 260
- Heat of wetting with oils, **5**: 143
- Hydrogen, permeability to, **5**: 76
- Hydrogen, solubility of, in, **3**: 270
- Impact strength, **2**: 570
- Isotopes, **1**: 45
- J-Phenomenon, **6**: 1
- Magnetic susceptibility, **6**: 354
- Magneton number, **6**: 346
- Mechanical properties, **2**: 552
- Melting point, **1**: 53, 104
- Nernst effect, **6**: 420
- Nickel, diffusion in, **5**: 77
- Nitrogen, solubility of, in, **3**: 270
- Oxidized
 - Emission, spectral, **5**: 244
 - Endurance limits, **2**: 601
- Peltier coefficient, **6**: 227
- Peltier effect, **6**: 228
- Persistent lines, **5**: 323
- Photoelectric threshold, **6**: 68

Copper.—(Continued)

- Positive ion emission excited by its positive ion, **6**: 65
- Quantum numbers, **5**: 408
- Radiation temperature, total, **5**: 246
- Refraction, index of, **5**: 249, 252
- Righi-Leduc effect, **6**: 421
- Solution velocity in
 - Ammonium hydroxide, **5**: 58
 - Benzaldehyde-toluene, **5**: 59
 - Iodine solutions, **5**: 56
 - Salt solutions, **5**: 57, 58
- Sound, velocity of, in, **6**: 465
- Specific heat
 - Liquid, **1**: 103; **5**: 94; **7**: 260
 - Solid, **1**: 104; **5**: 85, 88, 93; **7**: 261
- Spectral series, **5**: 398
- Sulfur dioxide, solubility of, in, **3**: 270
- Surface tension, **4**: 440
- Thermal conductivity, **2**: 572; **5**: 220, 221
- Crystals, **5**: 231
- Magnetic field, effect of, **6**: 424
- Thermal expansion
 - Liquid, **1**: 102; **2**: 463
 - Solid, **1**: 104; **2**: 460
- Thermochemistry, **5**: 187
- Thermodynamic potential, **5**: 88
- Thermoelectric properties, **6**: 214, 225
- Thomson coefficient, **6**: 228
- Vapor pressure, **3**: 205; **7**: 260
- Viscosity, **5**: 6, 7
- Volume change on fusion, **2**: 474
- Volume change on solidification, **2**: 475
- X-radiation, scattered, distribution of, **6**: 19
- X-radiation from target of, **6**: 47, 48
- X-ray absorption limits, **6**: 37
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 37
- X-ray lines, relative intensities, **6**: 32
- X-ray lines, width of, **6**: 26
- X-ray series, limiting frequencies, **6**: 35
- X-ray wave-lengths, standard, **6**: 34
- X-rays
 - Absorption, discontinuity in, **6**: 12
 - Absorption coefficient, **6**: 13–15
 - Emission efficiency, **6**: 11
 - Scattering, modification by, **6**: 17
 - Scattering of, **6**: 17
- Zeeman effect, **5**: 420
- Aluminum*
- Aluminum*-Cadmium-Magnesium
- Aluminum*-Cadmium-Magnesium-Manganese
- Aluminum*-Cadmium-Magnesium-Zinc
- Aluminum*-Carbon-Iron-Manganese
- Aluminum*-Chromium-Iron
- Aluminum*-Chromium-Iron-Silicon
- Aluminum*-Gold
- Aluminum*-Iron
- Aluminum*-Iron-Magnesium
- Aluminum*-Iron-Manganese
- Aluminum*-Iron-Manganese-Silicon
- Aluminum*-Iron-Manganese-Silicon-Zinc
- Aluminum*-Iron-Manganese-Tin-Zinc
- Aluminum*-Iron-Nickel-Silicon
- Aluminum*-Iron-Nickel-Silicon-Zinc
- Aluminum*-Iron-Silicon
- Aluminum*-Iron-Silicon-Zinc
- Aluminum*-Iron-Zinc
- Aluminum*-Magnesium
- Aluminum*-Magnesium-Manganese
- Aluminum*-Magnesium-Manganese-Nickel
- Aluminum*-Magnesium-Manganese-Zinc
- Aluminum*-Magnesium-Nickel

* Data for system will be found under this compound in Index. Full explanation on page vii.

† For 1929 values, see Birge, *Phys. Rev. Suppl.*, **1**: 1 (1929).

Copper.—(Continued)

- Aluminum*-Magnesium-Nickel-Silicon
- Aluminum*-Magnesium-Silicon
- Aluminum*-Manganese
- Aluminum*-Manganese-Silicon
- Aluminum*-Manganese-Zinc
- Aluminum*-Nickel
- Aluminum*-Phosphorus
- Aluminum*-Silicon
- Aluminum*-Tin
- Aluminum*-Tin-Zinc
- Aluminum*-Zinc
- Antimony*
- Antimony*-Arsenic
- Antimony*-Lead
- Antimony*-Lead-Tin
- Antimony*-Lead-Tin-Zinc
- Antimony*-Oxygen
- Antimony*-Tin
- Antimony*-Tin-Zinc
- Arsenic*
- Arsenic*-Bismuth-Oxygen
- Arsenic*-Iron
- Arsenic*-Iron-Manganese-Phosphorus
- Arsenic*-Iron-Silicon
- Arsenic*-Lead-Tin-Zinc
- Arsenic*-Nickel
- Arsenic*-Oxygen
- Arsenic*-Oxygen-Silver
- Arsenic*-Tin-Zinc
- Beryllium*
- Bismuth*
- Bismuth*-Tin
- Cadmium*
- Cadmium*-Silver
- Calcium*
- Carbon*-Chromium-Iron
- Carbon*-Chromium-Iron-Nickel
- Carbon*-Chromium-Iron-Tungsten
- Carbon*-Iron-Manganese
- Carbon*-Iron-Manganese-Silicon
- Carbon*-Iron-Nickel
- Cerium*
- Chromium*
- Chromium*-Molybdenum
- Chromium*-Nickel
- Cobalt*
- Cobalt*-Iron-Nickel-Zinc
- Cuprous oxide
- Freezing point-solubility, 4: 40
- Cuprous sulfide
- Solubility, mutual, 3: 393
- Gold
- Annealing temperature, 2: 591
- Density, 2: 589
- Electrical conductivity, 6: 164
- Equilibrium diagram, 2: 425
- Hardness, 2: 587
- Mechanical properties, 2: 586
- Specific heat, 5: 120
- Specific volume, 2: 589
- Thermal conductivity, 5: 223
- Thermal expansion, 2: 464, 474
- Thermoelectric properties, 6: 217
- X-ray diffraction data, 1: 349
- Gold-Nickel
- Equilibrium diagram, 2: 443
- Hardness, 2: 586
- Gold-Silver
- Density, 2: 589
- Electrical conductivity, 6: 164
- Equilibrium diagram, 2: 446
- Hardness, 2: 586
- Iron
- Absorption, index of, 5: 251
- Curie point, 6: 391
- Density, 2: 554
- Electrical conductivity, 6: 168, 172, 180
- Equilibrium diagram, 2: 432
- Hall effect, 6: 417

-Iron.—(Continued)

- Hardness, 2: 554
- Magnetic properties, 6: 391-392
- Mechanical properties, 2: 553
- Refraction, index of, 5: 251
- Thermoelectric properties, 6: 226
- Iron-Lead-Tin-Zinc
- Thermal conductivity, 5: 224
- Iron-Manganese
- Electrical conductivity, 6: 168
- Iron-Manganese-Nickel
- Electrical conductivity, 6: 169, 170, 194
- Thermoelectric properties, 6: 219, 225
- See also Monel metal.
- Iron-Manganese-Nickel-Zinc
- Electrical conductivity, 6: 170
- Iron-Manganese-Silicon
- Electrical conductivity, 6: 168
- Iron-Nickel
- Electrical conductivity, 6: 169
- Iron-Silicon
- Electrical conductivity, 6: 180
- Thermal expansion, 2: 469
- Iron-Tin
- Volume change on solidification, 2: 476
- Iron-Tin-Zinc
- Electrical conductivity, 6: 172
- Iron-Zinc
- Electrical conductivity, 6: 172
- Mechanical properties, 2: 556
- Lead
- Electrical conductivity, 6: 197
- Equilibrium diagram, 2: 434
- Lead-Tin
- Density, 2: 570
- Elastic properties, 2: 571
- Electrical conductivity, 6: 172
- Mechanical properties, 2: 561, 562
- Mold shrinkage, 2: 572
- Thermal conductivity, 5: 224
- Volume change on solidification, 2: 476
- Lead-Tin-Zinc
- Elastic properties, 2: 571
- Electrical conductivity, 6: 172
- Mechanical properties, 2: 561, 566, 569
- Mold shrinkage, 2: 572
- Thermal conductivity, 5: 225
- Volume change on solidification, 2: 475, 476
- Lead-Zinc
- Electrical conductivity, 6: 172, 198
- Endurance limits, 2: 602
- Equilibrium diagram, 2: 418
- Magnesium
- Electrical conductivity, 6: 168
- Endurance limits, 2: 604
- Equilibrium diagram, 2: 432
- Mechanical properties, 2: 545
- Specific heat, 5: 120
- Thermal conductivity, 5: 224
- Magnesium-Zinc
- Mechanical properties, 2: 545
- Manganese
- Density, 2: 554
- Electrical conductivity, 6: 168
- Endurance limits, 2: 600
- Equilibrium diagram, 2: 432
- Hardness, 2: 554
- Magnetic susceptibility, 6: 365
- Mechanical properties, 2: 553
- Specific heat, 5: 120
- Thermal conductivity, 5: 224
- X-ray diffraction data, 1: 349
- Manganese-Nickel
- Electrical conductivity, 6: 168, 170
- Magnetic field, effect of, 6: 422
- Endurance limits, 2: 600, 604, 608

-Manganese-Nickel.—(Continued)

- Equilibrium diagram, 2: 445, 446
- Specific heat, 5: 121
- Thermal conductivity, 5: 224
- Manganese-Phosphorus
- Density, 2: 555
- Manganese-Tin
- Curie point, 6: 408
- Magnetic properties, 6: 408
- Volume change on solidification, 2: 476
- Manganese-Zinc
- Mechanical properties, 2: 556
- Mercury
- Thermoelectric properties, 6: 220
- Viscosity, liquid, 5: 7
- Mercury-Silver-Tin
- Thermal expansion, 2: 472
- Molybdenum-Nickel
- Equilibrium diagram, 2: 444
- Nickel
- Absorption, index of, 5: 251
- Curie point, 6: 409
- Density, 2: 480
- Electrical conductivity, 2: 480; 6: 169, 170, 197
- Magnetic field, effect of, 6: 422
- Emission, spectral, 5: 254
- Endurance limits, 2: 600, 601, 604, 606
- Equilibrium diagram, 2: 433
- Hall effect, 6: 417
- Magnetic properties, 6: 405, 406
- Magnetic susceptibility, 6: 365
- Mechanical properties, 2: 480
- Nernst effect, 6: 420
- Refraction, index of, 5: 251
- Specific heat, 5: 120
- Thermal conductivity, 5: 224
- Thermal expansion, 2: 464
- Thermoelectric properties, 6: 219
- X-ray diffraction data, 1: 349
- Nickel-Silver
- Density, 2: 589
- Nickel-Tin
- Endurance limits, 2: 601
- Volume change on solidification, 2: 476
- Nickel-Tin-Zinc
- Elastic properties, 2: 571
- Thermal conductivity, 5: 224
- Volume change on solidification, 2: 475
- Nickel-Titanium
- Electrical conductivity, 6: 170
- Nickel-Zinc
- Annealing range, 2: 482
- Density, 2: 480
- Electrical conductivity, 2: 480; 6: 170, 194
- Endurance limits, 2: 601, 606
- Equilibrium diagram, 2: 445
- Mechanical properties, 2: 480
- Thermal conductivity, 5: 224
- Oxygen
- Density, 2: 554
- Hardness, 2: 554
- Mechanical properties, 2: 554
- Vapor pressure, 3: 352
- Oxygen-Sulfur
- Vapor pressure, 3: 374
- Palladium
- Equilibrium diagram, 2: 434
- X-ray diffraction data, 1: 349
- Phosphorus
- Density, 2: 555
- Electrical conductivity, 6: 171
- Equilibrium diagram, 2: 433
- Freezing point-solubility, 4: 29
- Hardness, 2: 554
- Mechanical properties, 2: 554
- Thermoelectric properties, 6: 219

* Data for system will be found under this compound in Index. Full explanation on page vii.

Copper.—(Continued)**-Phosphorus-Tin**

Electrical conductivity, 6: 172
Magnetic field, effect of, 6: 422
Mechanical properties, 2: 560
Specific heat, 5: 121
Viscosity, normal coefficient, 5: 6
Volume change on solidification, 2: 476

-Platinum

Equilibrium diagram, 2: 434

-Selenium

Equilibrium diagram, 2: 434
Freezing point-solubility, 4: 27

-Silicon

Density, 2: 594
Equilibrium data, 2: 434
Hardness, 2: 554
Specific heat, 5: 120
Thermal expansion, 2: 464, 469

-Silicon-Tin

Electrical conductivity, 6: 172
Volume change on solidification, 2: 476

-Silver

Absorption, index of, 5: 250
Annealing temperature, 2: 591
Density, 2: 587, 589
Electrical conductivity, 6: 160, 167
Equilibrium diagram, 2: 421
Hardness, 2: 554
Mechanical properties, 2: 584
Refraction, index of, 5: 250
Specific volume, 2: 589
Thermal conductivity, 5: 222
Thermal expansion, 2: 464
X-ray diffraction data, 1: 349

-Sulfur

Equilibrium diagram, 2: 433
Freezing point-solubility, 4: 25

-Sulfur dioxide

Free energy of reaction, 7: 265
Freezing point-solubility, 4: 40
Heat of reaction, 7: 265
Vapor pressure, 3: 355

-Tellurium

Equilibrium diagram, 2: 435
Freezing point-solubility, 4: 28

-Thallium

Equilibrium diagram, 2: 434

-Tin

Absorption, index of, 5: 251
Density, 2: 570
Elastic properties, 2: 571
Electrical conductivity, 6: 171, 197
Emission, spectral, 5: 254
Endurance limits, 2: 600, 601, 606
Equilibrium diagram, 2: 433
Hardness, 2: 563
Impact strength, 2: 570
Magnetic susceptibility, 6: 365
Mechanical properties, 2: 559, 561
Mold shrinkage, 2: 572
Refraction, index of, 5: 251
Specific heat, 5: 120
Surface tension, 4: 440
Thermal conductivity, 2: 572; 5: 225
Thermal expansion, 2: 464
Thermoelectric properties, 6: 219
Viscosity, liquid, 5: 7, 10
Volume change due to tempering, 2: 477
Volume change on solidification, 2: 475, 476
X-ray diffraction data, 1: 348

-Tin-Tungsten

Volume change on solidification, 2: 476

-Tin-Zinc

Density, 2: 570
Impact strength, 2: 570
Mechanical properties, 2: 556, 563

Copper**-Tin-Zinc.**—(Continued)

Mold shrinkage, 2: 572
Thermal conductivity, 2: 572
Volume change on solidification, 2: 475, 476

-Titanium

Electrical conductivity, 6: 172

-Zinc

Absorption, index of, 5: 251
Compressibility, 2: 548
Density, 2: 548
Electrical conductivity, 6: 172, 197
Endurance limits, 2: 600, 601, 606, 607
Equilibrium diagram, 2: 435
Hall effect, 6: 417
Magnetic susceptibility, 6: 365
Mechanical properties, 2: 546, 555
Refraction, index of, 5: 251
Specific heat, 5: 121
Thermal conductivity, 5: 225
Thermal expansion, 2: 464, 469, 470, 474
Thermoelectric properties, 6: 219
Viscosity, 5: 6
Volume change due to tempering, 2: 477
Volume change on solidification, 2: 475
X-ray diffraction data, 1: 348
See also Brass.

Copper amalgam**-Mercuric sulfate**

Free energy and heat of reaction, 7: 263

Copper arc, filters for, 5: 272**Copper hemitelluride**

Transition temperature, 4: 7

Copper hydride, band spectra, 5: 413**Copper iron sulfide**

X-ray diffraction data, 1: 343

Copper nickel steels

Analyses, table of, 2: 486
Mechanical properties, 2: 513

Copper nitride, heat of formation, 5: 187**Copper phosphide**

Decomposition pressure, 7: 264

Copper steels

Analyses, table of, 2: 486
Density, 2: 517
Mechanical properties, 2: 509
Specific heat, 2: 518
Thermal conductivity, 2: 518
See also Copper-Iron.

Copper tetramminenitrate**-Ammonia*****Copper-mercury cell, 6: 315****Coprosterol, optical rotatory power, 7: 464****Coquimbite**

Density, 1: 128
Refractive index, 1: 128, 166

Corbino effect, 6: 415**Cordage fibers, 2: 235****Cordierite, refractive index, 7: 24****Cordylite**

Density, 1: 148
Refractive index, 1: 148, 167

Cork

Acoustic absorption, 6: 459
Sound, velocity of, in, 6: 465
Thermal conductivity, 2: 315

Cork board, 2: 46**Corkite**

Density, 1: 129
Refractive index, 1: 129, 167

Cornish bronze, 2: 374; cf. 560, 601**Corona, electrical, 6: 107****Corronil (alloy), 2: 374; cf. 480, 604****Corrosiron, 2: 374; cf. 473****Corrosive sublimate. *See* Mercuric chloride.****Corsonite (alloy), 2: 374****Corundum**

Boiling point, 1: 136, 164
Compressibility, 2: 87; 3: 50
Density, 1: 136; 2: 87
Hardness, 2: 87
Heat of formation, 5: 194
Magnetic susceptibility, 6: 364
Melting point, 1: 136
Refractive index, 1: 136, 167; 7: 22
Specific heat, 2: 87
Thermal conductivity, 5: 232
Thermal expansion, 2: 87; 3: 43
See also Aluminum oxide.

Corybulbine

Absorption spectra, 5: 355
Optical rotatory power, 7: 476

Corycavamine

Optical rotatory power, 7: 476

Corydaline

Absorption spectra, 5: 355
Optical rotatory power, 7: 476

d-Corydine

Optical rotatory power, 7: 354, 476

Corypalmine

Optical rotatory power, 7: 476

Cosalite, density, 1: 116**Cosmic velocities, distribution, 1: 390****Costa Rica, weights and measures, 1: 5****Cotton**

Adsorption on, 3: 253
Bleaching, effect of, 2: 234
Breaking strengths, 2: 233
Density, 2: 237, 312
Fibers
Dimensions, 2: 233
Physical properties, 2: 233
Fireproofing agents, 2: 239
Hygroscopic moisture, 2: 237
Mercerized
Adsorption on, 3: 252
Hygroscopic moisture, 2: 237
Physical properties, 2: 234
Microscopical characteristics, 2: 232
Moisture content at various humidities
2: 237, 316, 323, 324
Regain at various humidities and
temperatures, 2: 238
Sodium hydroxide, absorption of, 2: 234
Tensile strength, humidity, effect of, 2: 237
Thermal conductivity, 2: 312

Cotton industry

Air conditioning in, 2: 322

Cottonseed hull fiber

Density, 2: 313
Thermal conductivity, 2: 313

Cottonseed oil**-Acetic acid*****-Ethyl alcohol**

Solubility, mutual, 3: 395

-Formic acid

Solubility, mutual, 3: 395

-Methyl alcohol

Solubility, mutual, 3: 395

-Oleates

Dielectric constant, 6: 104

Cotunnite

Density, 1: 115
Melting point, 1: 115
Refractive index, 1: 115, 173
See also Lead chloride.

Coulomb, definition, 1: 35**Coumaric acid (o-, m-, p-)**

Absorption spectra, 5: 344

Coumarin**-Sulfuric acid**

Freezing point-solubility, 4: 189

-1, 3, 5-Trinitrobenzene

Freezing point-solubility, 4: 118

Coumarone

Refractive index, 7: 42
Verdet constant, 6: 429

* Data for system will be found under this compound in Index. Full explanation on page vii.

Covellite. See Cupric sulfide.

Cowles brass, 2: 374

Craig gold, 2: 374

Crandallite

Density, **1:** 145

Refractive index, **1:** 145, 167

Creatine

Absorption spectra, ultra-violet, **5:** 366

Heat of combustion, **5:** 167

-Creatinine

Reaction kinetics, **7:** 141

Creatinine

Absorption spectra, **5:** 337

Heat of combustion, **5:** 167

-Creatine*

Crednerite, density, 1: 128

Creedite

Density, **1:** 145

Refractive index, **1:** 145, 168

Creosol

Dielectric absorption, **6:** 93

Dielectric constant, **6:** 93

Verdet constant, **6:** 429

Crescent steel, 2: 374

Cresol

-Acetone*

-Benzene*

-Carbon tetrachloride*

-Ethyl alcohol

Vapor pressure, partial, **3:** 288

-Ethyl ether

Vapor pressure, **3:** 289

-Phenol

Freezing point-solubility in water, **4:** 416

Vapor pressure, **3:** 289

o-Cresol

Absorption spectra, ultra-violet, **5:** 341, 362

Allotropic forms, **4:** 16

Azeotropic mixtures, **3:** 322-323

Boiling point, **3:** 223

Compressibility, **3:** 37

Critical point data, **3:** 249

Cryoscopic constant, **4:** 183

Density, **3:** 29, 33

Dielectric constant, **6:** 92

Electrical conductivity, aqueous solution, **6:** 281

Flash point, **2:** 161

Heat of solution in water, **5:** 150

Melting point under pressure, **4:** 16

Photoluminescence, **5:** 386

Solubility in water, **3:** 391; **4:** 252

Specific heat, **5:** 111

Surface tension, **4:** 456

Triple point, **4:** 16

Vapor pressure, **3:** 223

Verdet constant, **6:** 429

Viscosity, **5:** 42, **7:** 218

Volume change on melting, **4:** 16

-Aniline*

-Benzene*

-Chloroacetic acid*

-m-Cresol

Boiling point, **3:** 314

Density, **3:** 188

Freezing point-solubility, **4:** 150

-m-Cresol-Phenol

Density, **3:** 197

-p-Cresol

Freezing point-solubility, **4:** 150

-Dimethylpyrone

Freezing point-solubility, **4:** 150

-Ethyl alcohol

Density, **3:** 160

-Isoamyl acetate

Density, **3:** 188

-Nitrobenzene

Density, **3:** 177

o-Cresol.—(Continued)

-Phenol

Boiling point, **3:** 314

Density, **3:** 182

Freezing point-solubility, **4:** 136

-Picric acid

Freezing point-solubility, **4:** 120

-Pyridine

Density, **3:** 170

Freezing point-solubility, **4:** 117

Heat of solution, **5:** 158

Specific heat, **5:** 127

Viscosity, **5:** 42

-Sodium oleate

Freezing point-solubility in water, **4:** 419

Miscibility in water, **3:** 414

-Sulfuric acid

Freezing point-solubility, **4:** 188

-Trichloroacetic acid

Freezing point-solubility, **4:** 102

-Urea

Freezing point-solubility, **4:** 100

m-Cresol

Absorption spectra, ultra-violet, **5:** 341, 362

Azeotropic mixtures, **3:** 323

Birefringence, electric, **7:** 111

Boiling point, **3:** 223

Compressibility, **3:** 37

Critical point data, **3:** 249

Density, **3:** 29, 33

Aqueous solution, **3:** 114

Dielectric constant, **6:** 92

Electrical conductivity, **6:** 144

Aqueous solution, **6:** 281

Flash point, **2:** 161

Heat of vaporization, **5:** 137

Photoluminescence, **5:** 386

Refractive index, **7:** 40

Solubility in water, **3:** 391

Sound, velocity of, in, **6:** 464

Specific heat, **5:** 111

Surface tension, **4:** 456

Vapor pressure, **3:** 223

Verdet constant, **6:** 429

Viscosity, **5:** 42, 46, 48; **7:** 218

-Aniline*

-Aniline*-Benzene

-Benzene*

-Benzene*-Dimethylaniline

-Carbon disulfide*

-Chloroacetic acid*

-Chloroform*

-o-Cresol*

-o-Cresol*-Phenol

-p-Cresol

Density, **3:** 188

Freezing point-solubility, **4:** 151

-p-Cresol-Phenol

Density, **3:** 197

Freezing point-solubility, **4:** 169

-Dimethylaniline

Density, **3:** 188

Heat of solution, **5:** 157

Specific heat, **5:** 128

Surface tension, **4:** 474

Viscosity, **5:** 49

-Dimethylpyrone

Freezing point-solubility, **4:** 151

-Ethyl acetate

Vapor pressure, **3:** 289

-Ethyl ether

Distribution coefficients in water, **3:** 430

-Isoamyl acetate

Density, **3:** 188

Viscosity, **5:** 49

-Methyl alcohol

Vapor pressure, **3:** 287

m-Cresol.—(Continued)

-Naphthalene

Density, **7:** 86

Refractive index, **7:** 86

Dispersion, **7:** 105

-Phenol

Boiling point, **3:** 314

Density, **3:** 182

Freezing point-solubility, **4:** 136

-Picric acid

Freezing point-solubility, **4:** 120

-Pyridine

Density, **3:** 171

Freezing point-solubility, **4:** 117

Heat of solution, **5:** 158

Specific heat, **5:** 127

Viscosity, **5:** 42

-Quinoline

Density, **7:** 86

Refractive index, **7:** 86

Dispersion, **7:** 105

-Sodium oleate

Freezing point-solubility in water, **4:** 419

Miscibility in water, **3:** 414

-Toluene

Density, **3:** 187

Heat of solution, **5:** 157

Surface tension, **4:** 474

Vapor pressure, **3:** 289

Viscosity, **5:** 49

-o-Toluidine

Density, **3:** 188

Heat of solution, **5:** 157

Specific heat, **5:** 128

Surface tension, **4:** 474

Viscosity, **5:** 49

-Trichloroacetic acid

Freezing point-solubility, **4:** 102

-Urea

Freezing point-solubility, **4:** 100

p-Cresol

Absorption spectra, ultra-violet, **5:** 341, 362

Azeotropic mixtures, **3:** 323

Boiling point, **3:** 223

Compressibility, **3:** 37

Critical point data, **3:** 249

Cryoscopic constant, **4:** 183

Density, **3:** 29, 33

Dielectric constant, **6:** 92

Electrical conductivity, aqueous solution, **6:** 281

Flash point, **2:** 161

Heat of fusion, **5:** 133

Heat of solution in water, **5:** 150

Melting point under pressure, **4:** 10

Photoluminescence, **5:** 386

Solubility in water, **3:** 391; **4:** 251, 252

Surface tension, **4:** 456

Vapor pressure, **3:** 223

Verdet constant, **6:** 429

Viscosity, **5:** 42, 49; **7:** 218

-Aniline*

-Benzene*

-Chloroacetic acid*

-Cresol (o-, m-)*

-m-Cresol*-Phenol

-Dimethylpyrone

Freezing point-solubility, **4:** 151

-Isoamyl acetate

Density, **3:** 188

-Phenol

Boiling point, **3:** 314

Density, **3:** 182

Freezing point-solubility, **4:** 136

-Picric acid

Freezing point-solubility, **4:** 120

-Pyridine

Density, **3:** 171

Freezing point-solubility, **4:** 117

Viscosity, **5:** 42

* Data for system will be found under this compound in Index. Full explanation on page vii.

p-Cresol.—(Continued)

- Sodium oleate
 - Freezing point-solubility in water, **4**: 419
 - Miscibility in water, **3**: 414
- Sulfur
 - Freezing point lowering, **4**: 38
- Sulfuric acid
 - Freezing point-solubility, **4**: 188
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 102
- Urea
 - Freezing point-solubility, **4**: 100

Crestmorite

- Density, **1**: 144
- Refractive index, **1**: 144, 171

o-Cresyl methyl ether

- Absorption spectra, **5**: 343
- Electrical conductivity, **6**: 144
- Viscosity, **7**: 219

m-Cresyl methyl ether

- Absorption spectra, **5**: 343
- Viscosity, **7**: 219

p-Cresyl methyl ether

- Specific heat, **5**: 112
- Viscosity, **7**: 219

Cristobalite

- Crystallography, **4**: 20
- Density, **1**: 112; **2**: 82; **4**: 20
- Heat of formation, **5**: 182
- Heat of transition, **5**: 182
- Inversion points, **4**: 20
- Melting point, **1**: 112
- Optical constants, **6**: 341
- Refractive index, **1**: 112, 166
- Specific heat, **5**: 105
- Thermal expansion, **4**: 21
- Volume change on inversion, **4**: 21
- X-ray diffraction data, **1**: 341
- See also Silica.

Critical constants, **1**: 103; **3**: 248**Critical potentials**, **6**: 69–73

- Bands, **6**: 72–73
- Resonance lines, **6**: 70–72
- Transitions involved, **6**: 70–72

Crocidolite

- Density, **1**: 152
- Refractive index, **1**: 152, 172

Crocoitite

- Density, **1**: 133
- Melting point, **1**: 133
- Refractive index, **1**: 133, 174
- See also Lead chromate.

Crodon (alloy), **2**: 374**Cronite (alloy)**, **2**: 374**Cronstedtite**

- Density, **1**: 142
- Refractive index, **1**: 142, 167

Crotonaldehyde

- Absorption spectra, **5**: 337, 374
- Refractive index, **7**: 36

Crotonic acid

- Absorption spectra, **5**: 337
- Density, aqueous solution, **3**: 114
- Heat of combustion, **5**: 165
- Heat of fusion, **5**: 132
- Specific heat
 - Liquid, **5**: 108
 - Solid, **5**: 102
- Dichloroacetic acid
 - Freezing point-solubility, **4**: 105
- Sulfuric acid
 - Freezing point-solubility, **4**: 188
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 101

α-Crotonic acid

- Absorption spectra, ultra-violet, **5**: 375, 377
- Cryoscopic constant, **4**: 183

α-Crotonic acid.—(Continued)

- Electrical conductivity, aqueous solution, **6**: 266
- Melting point under pressure, **4**: 10
- Chloroacetic acid*
- Chloroform*
- β-Crotonic acid
 - Freezing point-solubility, **4**: 114
- Dimethylpyrone
 - Freezing point-solubility, **4**: 114
- Ethyl ether
 - Distribution coefficients in water, **3**: 426
- Xylene
 - Distribution coefficients in water, **3**: 426

β-Crotonic acid

- Electrical conductivity, aqueous solution, **6**: 266
- α-Crotonic acid*

Crotonic nitrile

- Absorption spectra, **5**: 336
- Dielectric constant, **6**: 86
- Refractive index, **7**: 36
- Aniline*

Crotorite (alloy), **2**: 374**Crova wave-length**, **5**: 242**Cryolite**

- Density, **1**: 153
- Melting point, **1**: 153
- Refractive index, **1**: 153, 168
- Specific heat, **5**: 100
- Transition temperature, **4**: 7
- Aluminum oxide*
- Aluminum oxide*-Calcium fluoride
- Calcium fluoride*
- Silica
 - Density, **3**: 134

Cryolithionite

- Density, **1**: 154
- Refractive index, **1**: 154, 165

Cryoscopic data

- Aqueous solutions, **4**: 254
- Inorganic solvents, **4**: 36, 214
- Organic solvents, **4**: 183, 215

Cryptohalite

- Density, **1**: 113
- Refractive index, **1**: 113, 165

Crystal gratings, **6**: 7**Crystal growth**, **1**: 355; **5**: 61**Crystal structure**

- Magnetism, relation of, **6**: 347
- X-ray, **1**: 338; **2**: 356

Crystallization, velocity of, **5**: 60**Crystallography, carbon compounds**, **1**: 320**Crystolon.** See Carborundum.**Cuba, weights and measures**, **1**: 5**Cubanite, density**, **1**: 129**Cubebin, optical rotatory power**, **7**: 362**Cufenium (alloy)**, **2**: 375**Cuivre poli**, **2**: 375; cf. 555, 601**Culmitz alloy**

- Thermoelectric properties, **6**: 222

Cumaldehyde

- Absorption spectra, **5**: 346
- Diffusion in methyl alcohol, **5**: 73

Cumene

- Absorption spectra, **5**: 333
- Birefringence, **7**: 111
- Boiling point, **3**: 225
- Compressibility, **3**: 39
- Dielectric constant, **6**: 94
- Magnetic susceptibility, **6**: 364
- Vapor pressure, **3**: 225
- Benzoic acid*
- Camphoric acid*
- Salicylic acid
 - Density, **3**: 187

Cumic acid

- Electrical conductivity, aqueous solution, **6**: 295

Cumic acid.—(Continued)

- Heat of combustion, **5**: 166
- Heat of solution in water, **5**: 150
- Cumicaldehyde**
 - Absorption spectra, **5**: 333
 - Dielectric constant, **6**: 95
 - Surface tension, **4**: 460
 - Verdet constant, **6**: 430
- Cuminyl alcohol**
 - Verdet constant, **6**: 430
- Cuniloy**, **2**: 375
- Cup anemometer**, **1**: 403
- Cupreine, optical rotatory power**, **7**: 475
- Cupric acetate**
 - Absorption spectra, solutions, **5**: 327
 - Ammonia, decomposition pressure, **7**: 264
 - Boiling point, **1**: 123, 163
 - Boiling point elevation in aqueous solution, **3**: 325
 - Density, **1**: 123
 - Aqueous solution, **3**: 67
 - Electrical conductivity, aqueous solution, **6**: 244
 - Freezing point lowering of aqueous solution, **4**: 256
 - Heat of formation, **5**: 188
 - Magnetic susceptibility, **6**: 357
 - Aqueous solution, **6**: 364
 - Melting point of hydrate, **1**: 123
 - Refractive index, **1**: 123, 170
 - Viscosity, aqueous solution, **5**: 14
 - Acetic acid*
 - Potassium bromide
 - Density, aqueous solution, **3**: 100
 - Pyridine
 - Freezing point-solubility, **4**: 200
- Cupric benzoate**
 - Ammonia, decomposition pressure, **7**: 264
- Cupric bromide**
 - Absorption spectra, solutions, **5**: 327, 328
 - Ammonia
 - Decomposition pressure, **7**: 262
 - Heat of decomposition, **7**: 262
 - Heat of formation, **5**: 188
 - Decomposition pressure, **7**: 262
 - Density, aqueous solution, **3**: 66
 - Electrical conductivity, aqueous solution, **6**: 234
 - Freezing point lowering of aqueous solution, **4**: 256
 - Heat of formation, **5**: 187
 - Magnetic susceptibility, **6**: 357
 - Aqueous solution, **6**: 364
 - Methylamine complex
 - Decomposition pressure, **7**: 262
 - Heat of decomposition, **7**: 262
 - Transference number, **6**: 310
 - Methyl acetate
 - Boiling point elevation, **3**: 340
- Cupric carbonate**
 - Heat of formation, **5**: 188
 - Sodium bicarbonate-Sodium carbonate
 - Freezing point-solubility in water, **4**: 371
- Cupric chlorate**
 - Ammonia
 - Decomposition pressure, **7**: 262
 - Heat of decomposition, **7**: 262
 - Density, aqueous solution, **3**: 66, 104
 - Electrical conductivity, aqueous solution, **6**: 244, 254
 - Freezing point lowering of aqueous solution, **4**: 256
 - Heat of formation, **5**: 187
 - Refractive index, aqueous solution, **7**: 70
 - Dispersion, **7**: 100
 - Solubility in water, **4**: 222
- Cupric chloride**
 - Absorption spectra, solutions, **5**: 327, 328, 330

* Data for system will be found under this compound in Index. Full explanation on page vii.

Cupric chloride.—(Continued)

- Ammine
 - Absorption spectra, **5**: 328
 - Decomposition pressure, **7**: 262
 - Heat of decomposition, **7**: 262
 - Heat of formation, **5**: 188
- Boiling point, **1**: 122, 163
- Boiling point elevation in aqueous solution, **3**: 325
- Decomposition pressure, **7**: 261
- Decomposition pressure of hydrates, **7**: 261
- Density, **1**: 122
 - Aqueous solution, **3**: 66, 107
- Dielectric constant, **6**: 76
- Diffusion in water, **5**: 65
- Electrical conductivity, aqueous solution, **6**: 231, 232
- Freezing point lowering of aqueous solution, **4**: 256
- Heat of formation, **5**: 187
- Hydrolysis constant, **7**: 261
- Magnetic susceptibility, **6**: 357
 - Aqueous solution, **6**: 364
- Melting point, **1**: 122
- Methylamine complex
 - Decomposition pressure, **7**: 262
 - Heat of decomposition, **7**: 262
- Photoelectric current, **6**: 68
- Refractive index, **1**: 122, 172
- Solubility in water, **4**: 222
- Specific heat
 - Aqueous solution, **5**: 122
 - Solid, **5**: 97
- Surface tension, aqueous solution, **4**: 464
- Thermal conductivity, **5**: 216
- Transference number, **6**: 310, 311
- Vapor pressure, **3**: 208
 - Aqueous solution, **3**: 366
- Vapor pressure lowering in aqueous solution, **3**: 294
- Viscosity, aqueous solution, **5**: 14
- X-rays, absorption coefficient, **6**: 13
- Acetone*
 - Acetone*-Potassium chloride
 - Acetone*-Sodium chloride
 - Ammonium chloride*
 - Ammonium chloride*-Barium chloride
 - Ammonium chloride*-Potassium chloride
 - Ammonium sulfate*
 - Barium chloride*
 - Barium chloride*-Potassium chloride
 - Barium chloride*-Sodium chloride
 - Bismuth chloride*
 - Cadmium chloride*
- Cupric oxide
 - Density, aqueous solution, **3**: 98
- Cupric sulfate
 - Freezing point-solubility in water, **4**: 277
- Cuprous chloride
 - Freezing point-solubility, **4**: 57
- Cuprous chloride-Hydrogen chloride
 - Freezing point-solubility in water, **4**: 305
- Ethyl acetate
 - Density, **3**: 139
- Ethyl alcohol
 - Boiling point elevation, **3**: 337
 - Density, **3**: 139
 - Magnetic susceptibility, **6**: 364
- Ethyl alcohol-Potassium chloride
 - Solubility relations, **4**: 211
- Ethyl alcohol-Toluene
 - Density, **3**: 143
- Ethyl ether
 - Distribution coefficients in hydrochloric acid, **3**: 421

Cupric chloride.—(Continued)

- Hydrogen chloride
 - Density, aqueous solution, **3**: 95
 - Freezing point-solubility in water, **4**: 306
 - Viscosity, aqueous solution, **5**: 18
- Lithium chloride
 - Density, aqueous solution, **3**: 98
 - Freezing point-solubility in water, **4**: 306
 - Viscosity, aqueous solution, **5**: 19
- Lithium sulfate
 - Freezing point-solubility, **4**: 278
- Magnesium chloride
 - Density, aqueous solution, **3**: 98
 - Viscosity, aqueous solution, **5**: 19
- Mercuric chloride
 - Boiling point elevation in aqueous solution, **3**: 347
 - Freezing point-solubility in water, **4**: 305
- Methyl acetate
 - Boiling point elevation, **3**: 340
 - Density, **3**: 139
- Methyl alcohol
 - Boiling point elevation, **3**: 334
- Methyl sulfide
 - Density, **3**: 338
- Potassium chloride
 - Density, aqueous solution, **3**: 98
 - Freezing point-solubility in water, **4**: 307
 - Vapor pressure, aqueous solution, **3**: 380
 - Viscosity, aqueous solution, **5**: 19
- Potassium sulfate
 - Freezing point-solubility in water, **4**: 278, 382
- Pyridine
 - Boiling point elevation, **3**: 342
 - Freezing point-solubility, **4**: 200
- Rubidium sulfate
 - Freezing point-solubility, **4**: 278
- Sodium chloride
 - Boiling point elevation in aqueous solution, **3**: 347
 - Density, aqueous solution, **3**: 98
 - Freezing point-solubility in water, **4**: 306
 - Viscosity, aqueous solution, **5**: 19
- Sodium sulfate
 - Freezing point-solubility in water, **4**: 277, 382
- Strontium chloride
 - Density, aqueous solution, **3**: 98
 - Freezing point-solubility in water, **4**: 306
- Sulfuric acid
 - Density, aqueous solution, **3**: 96
- Thallium monochloride
 - Solubility in water, **7**: 320
- Cupric distrontium formate
 - Refractive index, **1**: 147, 169
- Cupric dithionate
 - Ammine
 - Decomposition pressure, **7**: 263
 - Heat of decomposition, **7**: 263
 - Heat of formation, **5**: 187
 - Solubility in water, **4**: 222
 - Ammonium dithionate*
- Cupric ferrocyanide
 - Dehydration behavior of hydrate, **7**: 279
- Cupric fluoride, heat of formation, **5**: 187
- Cupric fluosilicate
 - Density, **1**: 123
 - Refractive index, **1**: 123, 166; **7**: 21
- Cupric formate
 - Ammine
 - Decomposition pressure, **7**: 264
 - Heat of decomposition, **7**: 264
 - Crystallography, **1**: 320

Cupric formate.—(Continued)

- Density, **1**: 123
 - Aqueous solution, **3**: 67
- Heat of formation, **5**: 188
- Refractive index, **1**: 123, 170
- Surface tension, aqueous solution, **4**: 464
- Viscosity, aqueous solution, **5**: 14
- Formic acid
 - Density, aqueous solution, **3**: 102
- Cupric hydroxide
 - Decomposition pressure, **7**: 261
 - Free energy, **7**: 261
 - Heat of formation, **5**: 187
- Malic acid
 - Freezing point-solubility in water, **4**: 414
- Sulfuric acid
 - Freezing point-solubility in water, **4**: 339, 389
- Cupric iodate
 - Ammine
 - Decomposition pressure, **7**: 263
 - Heat of decomposition, **7**: 263
- Cupric iodide
 - Ammine
 - Decomposition pressure, **7**: 263
 - Heat of decomposition, **7**: 263
 - Heat of formation, **5**: 188
 - Heat of formation, **5**: 187
 - Luminescence, **5**: 389
 - Methylamine complex
 - Decomposition pressure, **7**: 263
 - Heat of decomposition, **7**: 263
- Cupric 1, 5-naphthalenedisulfonate
 - Density, **1**: 123
 - Refractive index, **1**: 123, 171
- Cupric naphthalene-2-sulfonate
 - Ammine, decomposition pressure, **7**: 264
- Cupric α -naphthoylbenzoate
 - Ammine, decomposition pressure, **7**: 264
- Cupric nitrate
 - Absorption spectra, **5**: 328, 330
 - Ammine
 - Absorption spectra, **5**: 328
 - Decomposition pressure, **7**: 264
 - Heat of decomposition, **7**: 264
 - Concentration cell, **6**: 326
 - Density, aqueous solution, **3**: 67, 107
 - Electrical conductivity, **6**: 148
 - Aqueous solution, **6**: 237, 240
 - Freezing point lowering of aqueous solution, **4**: 256
 - Heat of formation, **5**: 187
 - Heat of fusion, **5**: 131
 - Hydrolysis constant, **7**: 261
 - Magnetic susceptibility, **6**: 357
 - Aqueous solution, **6**: 364
 - Refractive index, aqueous solution, **7**: 70
 - Dispersion, **7**: 100
 - Solubility in water, **4**: 222
 - Specific heat, aqueous solution, **5**: 122
 - Viscosity, aqueous solution, **5**: 14
 - Acetone*-Ethyl alcohol
 - Ammonium nitrate*
 - Cupric sulfate
 - Freezing point-solubility in water, **4**: 323
 - Iodine-Lead iodide-Lead nitrate
 - Density, aqueous solution, **3**: 100
 - Lead iodide
 - Freezing point-solubility in water, **4**: 319
 - Lead nitrate
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility in water, **4**: 360
 - Nitric acid
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility in water, **4**: 362

Cupric nitrate.—(Continued)

- Silver nitrate*
Freezing point-solubility in water, 4: 362
- Sodium nitrate*
Freezing point-solubility in water, 4: 362
- Sodium sulfate*
Freezing point-solubility in water, 4: 323, 387
- Sulfuric acid*
Density, aqueous solution, 3: 96
- Cupric oleate**, dielectric constant, 6: 97
- Cupric oxalate**
Ammine, decomposition pressure, 7: 264
- Cupric oxide**
Albedo, 5: 263
Contact potential, 6: 57
Dielectric constant, 6: 76
Electrical conductivity, 6: 153
Electrons, thermal emission of, 6: 54
Free energy, 7: 261
Decomposition, 7: 265
Fusion, 7: 261
Heat content, 7: 261
Heat of decomposition, 7: 265
Heat of formation, 5: 187
Magnetic susceptibility, 6: 357
Photoelectric current, 6: 68, 69
Radiation temperature, total, 5: 246
Reduction, equilibrium constant of, 7: 265
Specific heat, 5: 97
Thermal conductivity, 5: 216
Thermionic work function, 6: 54
Thermoelectric power, 6: 224
Vapor pressure, 3: 208
X-ray diffraction data, 1: 342
See also Tenorite.
- Carbon dioxide**
- Cupric chloride**
- Cupric sulfate*
Density, aqueous solution, 3: 98
- Cuprous chloride*
Freezing point-solubility, 4: 57
- Lead oxide*
Freezing point-solubility, 4: 50
- Manganese dioxide*
Electrical conductivity, 6: 151
- Sea salt*
Freezing point-solubility, 4: 76
- Sulfur dioxide*
Free energy of reaction, 7: 265
Heat of reaction, 7: 265
- Cupric oxysulfate**
Free energy, 7: 265
Decomposition, 7: 265
Heat content, 7: 265
Heat of decomposition, 7: 265
- Cupric perchlorate**
Absorption spectra, solutions, 5: 328
Ammine
Decomposition pressure, 7: 262
Heat of decomposition, 7: 262
Decomposition pressure of hydrate, 7: 262
- Cupric phosphide**
Magnetic susceptibility, 6: 357
- Cupric potassium carbonate**
Heat of formation, 5: 206
- Cupric potassium chloride**
Density, 1: 156
Aqueous solution, 3: 91
Heat of formation, 5: 206
Magnetic susceptibility, 6: 360
Refractive index, 1: 156, 167
Specific heat, 5: 101
- Cupric potassium selenate**
Density, 1: 156
Refractive index, 1: 156, 169; 7: 31

Cupric potassium sulfate

- Boiling point elevation in aqueous solution, 3: 326
Density, aqueous solution, 3: 91
Heat of formation, 5: 206
Refractive index, 7: 31
Solubility in water, 4: 241
- Cupric propionate**
Density, aqueous solution, 3: 67
Viscosity, aqueous solution, 5: 14
- Propionic acid*
Density, aqueous solution, 3: 102
- Cupric rubidium chloride**
Heat of formation, 5: 207
- Cupric rubidium selenate**
Refractive index, 7: 31
- Cupric rubidium sulfate**
Density, 1: 160
Refractive index, 1: 160, 169; 7: 31
Solubility in water, 4: 243
- Cupric salicylate**
Transference number, 6: 310
- Cupric selenate**
Heat of formation, 5: 187
Reflectivity, selective, 5: 260
- Cupric selenide**
Heat of formation, 5: 187
- Cupric sodium chloride**
Magnetic susceptibility, 6: 360
- Cupric sodium cyanide**
Density, aqueous solution, 3: 86
- Cupric sodium sulfate**
Solubility in water, 4: 238
Specific heat, 5: 100
- Cupric sulfate**
Absorption spectra, solutions, 5: 327
328, 330
Adsorption by charcoal, 3: 252
Ammine
Absorption spectra, 5: 327
Decomposition pressure, 7: 263
Heat of decomposition, 7: 263
Heat of formation, 5: 188
Boiling point elevation in aqueous solution, 3: 325
Concentration cell, 6: 326
Density, 1: 122; 3: 44
Aqueous solution, 3: 67, 107
Dielectric constant, 6: 76
Aqueous solution, 6: 101, 104
Diffusion in water, 5: 65
Drying agent, value as, 3: 385
Electrical conductivity, 6: 154
Aqueous solution, 6: 231, 235, 240
Free energy, 7: 263
Decomposition, 7: 265
Freezing mixtures, use in, 1: 64
Freezing point lowering of aqueous solution, 4: 256
Heat content, 7: 263
Heat of decomposition, 7: 265
Heat of formation, 5: 187
Hydrates
Free energy, 7: 263
Heat content, 7: 263
Magnetic susceptibility, 6: 357
Aqueous solution, 6: 364
Reflectivity, selective, 5: 260
Solubility in water, 4: 222
Solution velocity in water, 5: 56, 59
Sound, velocity of, in aqueous solution, 6: 464
Specific heat, 5: 97; 7: 263
Aqueous solution, 5: 122
Spectral filter, use as, 5: 273
Surface tension, aqueous solution, 4: 464
Thermal conductivity, 5: 216
Aqueous solution, 5: 229
Transference number, 6: 310
Vapor pressure, aqueous solution, 3: 367

Cupric sulfate.—(Continued)

- Vapor pressure lowering in aqueous solution, 3: 294
Viscosity, aqueous solution, 5: 14
X-rays, absorption coefficient, 6: 13
See also Chalcantite.
- Ammonia**
- Ammonium chloride**
- Ammonium chloride**-*Potassium sulfate*
- Ammonium sulfate**
- Ammonium sulfate**-*Lithium sulfate*
- Ammonium sulfate**-*Nickel sulfate*
- Ammonium sulfate**-*Potassium sulfate*
- Ammonium sulfate**-*Zinc sulfate*
- Calcium hydroxide**
- Calcium sulfate**
- Cupric chloride**
- Cupric nitrate**
- Cupric oxide**
- Cupric sulfide*
Vapor pressure, 3: 358
- Glycerol*
Viscosity, aqueous solution, 5: 24
- Hydrochloric acid*
Density, aqueous solution, 3: 95
- Lithium chloride*
Freezing point-solubility in water, 4: 278
- Lithium sulfate*
Freezing point-solubility in water, 4: 341
- Manganous sulfate*
Density, aqueous solution, 3: 98
Freezing point-solubility in water, 4: 339, 389
Viscosity, aqueous solution, 5: 19
- Nitric acid*
Density, aqueous solution, 3: 97
- Potassium chloride*
Freezing point-solubility in water, 4: 278, 382
- Potassium sulfate*
Density, aqueous solution, 3: 98
Freezing point-solubility in water, 4: 341
Viscosity, aqueous solution, 5: 19
- Rubidium chloride*
Freezing point-solubility in water, 4: 278
- Sodium chloride*
Freezing point-solubility in water, 4: 277, 382
- Sodium nitrate*
Freezing point-solubility in water, 4: 323, 387
- Sodium sulfate*
Density, aqueous solution, 3: 98
Freezing point-solubility in water, 4: 342, 389
Viscosity, aqueous solution, 5: 19
- Sodium sulfate*-*Sulfuric acid*
Freezing point-solubility in water, 4: 340, 389
- Sulfuric acid*
Density, aqueous solution, 3: 96
Freezing point-solubility, 4: 43
- Zinc sulfate*
Freezing point-solubility in water, 4: 337, 389
Thermal conductivity, aqueous solution, 5: 229
- Cupric sulfide**
Density, 1: 122
Emission, spectral, 5: 258
Free energy, 7: 263
Decomposition, 7: 265
Heat content, 7: 263
Heat of formation, 5: 187
Magnetic susceptibility, 6: 357
Photoelectric current, 6: 69
Specific heat, 5: 97; 7: 263

* Data for system will be found under this compound in Index. Full explanation on page vii.

Cupric sulfide.—(Continued)

- Thermal conductivity, **5**: 216
- Transformation temperature, **1**: 122
- Antimony trisulfide*
- Cupric sulfate*
- Cuprous sulfide
- Density, **3**: 134
- Cupric tartrate**
- Solubility in water, **4**: 223
- Cupric tetrathionate**
- Ammine
- Decomposition pressure, **7**: 264
- Heat of decomposition, **7**: 264
- Cupric thallium selenate**
- Refractive index, **7**: 31
- Cupric thallium sulfate**
- Refractive index, **7**: 31
- Solubility in water, **4**: 223
- Cupric thiocyanate**
- Ammines, decomposition pressure, **7**: 264
- Ammonia*
- Cupric thiosulfate**
- Ammine, decomposition pressure, **7**: 263
- Cuprite**
- Density, **1**: 121
- Refractive index, **1**: 121, 165
- Thermal expansion, **3**: 43
- See also Cuprous oxide.
- Cuprodescloizite**
- Density, **1**: 135
- Refractive index, **1**: 135, 173
- Cuproferrite**
- Kerr constant, **6**: 435
- Transmission of radiant energy, **5**: 270
- Cupror** (alloy), **2**: 375; cf. 574, 601
- Cuprotungstite**
- Refractive index, **1**: 134, 173
- Cuprous bromide**
- Ammines
- Decomposition pressure, **7**: 262
- Heat of decomposition, **7**: 262
- Heat of formation, **5**: 188
- Band spectra, **5**: 413
- Concentration cell, **6**: 326
- Electrical conductivity, **6**: 148
- Heat of formation, **5**: 187
- Transition temperature, **4**: 7
- Vapor pressure, **3**: 214
- X-ray diffraction data, **1**: 342
- Cadmium bromide*
- Cuprous chloride
- Freezing point-solubility, **4**: 57
- Cuprous iodide
- Freezing point-solubility, **4**: 57
- Diethyl sulfide
- Boiling point elevation, **3**: 342
- Methyl sulfide
- Boiling point elevation, **3**: 338
- Potassium bromide
- Freezing point-solubility, **4**: 57
- Pyridine
- Boiling point elevation, **3**: 342
- Cuprous chloride**
- Ammines
- Decomposition pressure, **7**: 261
- Heat of decomposition, **7**: 261
- Heat of formation, **5**: 188
- Band spectra, **5**: 413
- Chloride ion, equilibrium constant, **7**: 262
- Concentration cell, **6**: 326
- Electrical conductivity, **6**: 148
- Free energy, **7**: 261
- Heat of formation, **5**: 187
- Photoelectric current, **6**: 68
- Reduction, electrode potential, **7**: 261
- Solubility in antimony trichloride, **4**: 47
- Specific heat, **5**: 97
- Vapor pressure, **3**: 214
- X-ray diffraction data, **1**: 342

Cuprous chloride.—(Continued)

- Aluminum chloride*
- Ammonium chloride*
- Bismuth*
- Bismuth chloride*
- Cadmium chloride*
- Calcium chloride*
- Cesium chloride*
- Cupric chloride*
- Cupric chloride*-Hydrogen chloride
- Cupric oxide*
- Cuprous bromide*
- Cuprous iodide
- Freezing point-solubility, **4**: 57
- Cuprous sulfide
- Freezing point-solubility, **4**: 57
- Diethyl sulfide
- Boiling point elevation, **3**: 342
- Ferric chloride
- Freezing point-solubility, **4**: 57
- Ferrous chloride
- Freezing point-solubility in water, **4**: 305
- Hydrochloric acid
- Density, aqueous solution, **3**: 95
- Freezing point-solubility in water, **4**: 305; **7**: 262
- Vapor pressure, aqueous solution, **3**: 376
- Lead chloride
- Freezing point-solubility, **4**: 51
- Lithium chloride
- Freezing point-solubility, **4**: 57
- Magnesium chloride
- Freezing point-solubility, **4**: 57
- Mercuric chloride
- Freezing point-solubility, **4**: 56
- Methyl sulfide
- Boiling point elevation, **3**: 338
- Potassium chloride
- Density, **3**: 134
- Freezing point-solubility, **4**: 57
- Freezing point-solubility in water, **4**: 306
- Pyridine
- Boiling point elevation, **3**: 342
- Quinoline
- Boiling point elevation, **3**: 347
- Rubidium chloride
- Freezing point-solubility, **4**: 57
- Silver chloride
- Equilibrium in aqueous solution, **7**: 266
- Freezing point-solubility, **4**: 57
- Sodium chloride
- Freezing point-solubility, **4**: 57
- Freezing point-solubility in water, **4**: 306
- Stannous chloride
- Freezing point-solubility, **4**: 49
- Thallium monochloride
- Freezing point-solubility, **4**: 53
- Zinc chloride
- Freezing point-solubility, **4**: 54
- Cuprous cyanide**
- Heat of formation, **5**: 188
- Potassium cyanide
- Freezing point-solubility, **4**: 58
- Freezing point-solubility in water, **4**: 376, 393
- Pyridine
- Boiling point elevation, **3**: 342
- Sodium cyanide
- Freezing point-solubility, **4**: 58
- Cuprous fluoride**, band spectra, **5**: 413
- Cuprous hydroxide**
- Concentration cell, **6**: 326
- Cuprous iodide**
- Ammines
- Decomposition pressure, **7**: 262
- Heat of decomposition, **7**: 262
- Heat of formation, **5**: 188

Cuprous iodide.—(Continued)

- Band spectra, **5**: 413
- Electrical conductivity, **6**: 148
- Aqueous solution, **6**: 258
- Entropy, **5**: 90
- Hall effect, **6**: 416
- Heat content, **5**: 90
- Heat of formation, **5**: 187
- Specific heat, **5**: 90, 97
- Thermodynamic potential, **5**: 90
- Transition temperature, **4**: 7
- Vapor pressure, **3**: 214
- Volume change on melting, **4**: 12
- X-ray diffraction data, **1**: 342
- See also Marshite.
- Cadmium iodide*
- Cuprous bromide*
- Cuprous chloride*
- Iodine
- Freezing point-solubility in water, **4**: 267
- Silver iodide
- Freezing point-solubility, **4**: 57
- Cuprous oxide**
- Brightness temperature, **1**: 60
- Decomposition pressure, **7**: 265
- Free energy, **7**: 265
- Decomposition, **7**: 265
- Fusion, **7**: 265
- Heat content, **7**: 265
- Heat of decomposition, **7**: 265
- Heat of formation, **5**: 187
- Heat of fusion, **7**: 265
- Magnetic susceptibility, **6**: 357
- Melting point, **7**: 265
- Photoconductivity, **6**: 66
- Photoelectric current, **6**: 68
- Reduction, equilibrium constant, **7**: 265
- Specific heat, **5**: 97
- Thermal expansion, **3**: 43
- Thermoelectric power, **6**: 224
- X-ray diffraction data, **1**: 342
- See also Cuprite.
- Ammonium hydroxide*
- Copper*
- Silica
- Freezing point-solubility, **4**: 85
- Sulfur dioxide
- Free energy of reaction, **7**: 265
- Cuprous potassium cyanide**
- Refractive index, **1**: 156, 165
- Cuprous selenide**
- Heat of formation, **5**: 187
- Heat of transition, **5**: 187
- Magnetic susceptibility, **6**: 357
- Specific heat, **5**: 97
- Transition temperature, **4**: 7
- X-ray diffraction data, **1**: 342
- Cuprous sulfate**, heat of formation, **5**: 187
- Cuprous sulfide**
- Density, **1**: 122
- Melting point, **1**: 122
- Electrical conductivity, **6**: 148
- Emission, spectral, **5**: 258
- Free energy, **7**: 265
- Allotropic transformation, **7**: 265
- Heat content, **7**: 265
- Heat of allotropic transformation, **7**: 265
- Heat of formation, **5**: 187
- Heat of transition, **5**: 187
- Magnetic susceptibility, **6**: 357
- Photoelectric current, **6**: 69
- Silver ions, diffusion of, in, **5**: 77
- Specific heat, **5**: 97; **7**: 265
- Thermal conductivity, **5**: 221
- Transition temperature, **4**: 7
- Antimony trisulfide*
- Copper*
- Cupric sulfide*
- Cuprous chloride*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Cuprous sulfide.—(Continued)

- Lead sulfide
 - Freezing point-solubility, 4: 52
- Nickel subsulfide
 - Freezing point-solubility, 4: 57
- Nickel sulfide
 - Freezing point-solubility, 4: 58
- Silver sulfide
 - Freezing point-solubility, 4: 57
- Sodium sulfide
 - Freezing point-solubility, 4: 58
- Sulfur dioxide
 - Free energy and heat of reaction, 7: 265
- Zinc sulfide
 - Freezing point-solubility, 4: 54, 78
- Cuprous telluride**
 - Heat of formation, 5: 187
 - Transition temperature, 4: 7
- Cuprous thiocyanate**
 - Electrical conductivity, aqueous solution, 6: 258
- Curie, definition, 1: 35**
- Curie point, definition, 6: 346, 369**
- Curie's constant, conversion factors, 1: 21**
- Curie's law, 6: 350**
- Curite, density, 1: 134**
- Current, definition, 1: 35**
- Cussonine, optical rotatory power, 7: 477**
- Custerite**
 - Density, 1: 144
 - Refractive index, 1: 144, 171
- Cyameline**
 - Magnetic susceptibility, 6: 361
 - Specific heat, 5: 102
- Cyanamide, 7: 245**
 - Cryoscopic constant, 4: 183
 - Freezing point lowering of aqueous solution, 4: 261
 - Heat of formation, 5: 182
 - Heat of fusion, 5: 132
 - Heat of solution in water, 5: 148
 - Hydrolysis constants, 7: 141
 - Polymerization, kinetics of, 7: 124
 - Solubility in water, 4: 251
 - Specific heat, 5: 101
- Dicyandiamide
 - Freezing point-solubility, 4: 99
- Urea
 - Freezing point-solubility, 4: 99
- Cyanate ion, free energy, 7: 244**
- Cyanic acid**
 - Absorption spectra, 5: 334
 - Electrical conductivity, aqueous solution, 6: 261
 - Free energy
 - Aqueous solution, 7: 245
 - Ionization, 7: 245
 - Heat of formation, 5: 182
 - Ionization constant, 7: 245
- Cyanide ion, free energy, 7: 244**
- Cyanin**
 - Photoluminescence, 5: 387
 - Refractive index, 7: 12, 15
- Cyanite**
 - Density, 1: 137
 - Refractive index, 1: 137, 172; 7: 22
 - Specific heat, 5: 101
- Cyanoacetic acid**
 - Dielectric constant, 6: 85
 - Electrical conductivity, aqueous solution, 6: 263
- Benzene*
 - Distribution coefficients in water, 3: 425
- Cyanobenzene**
 - Chlorobenzene*
 - Density, 3: 160
 - Ethyl alcohol
 - Density, 3: 167

Cyanocamphor

- Optical rotatory power, 7: 438
- Cyanochoite**
 - Density, 1: 156
 - Refractive index, 1: 156, 168
- See also Cupric potassium sulfate.
- 1-Cyanoethyl acetate**
 - Dielectric constant, 6: 88
- Cyanogen**
 - Absorption spectra, 5: 331
 - Band spectra, 5: 412
 - Boiling point, 3: 216, 231
 - Critical point data, 3: 231, 248
 - Critical potentials, 6: 72
 - Detonation, 2: 185
 - Dielectric constant, 6: 83
 - Electrical conductivity, 6: 143
 - Explosion in closed vessels, 2: 191
 - Explosive mixtures, limiting dilutions, 2: 186
 - Free energy, 7: 245
 - Heat of combustion, 5: 167
 - Heat of dissociation, 5: 418
 - Heat of formation, 5: 181
 - Heat of vaporization, 5: 136
 - Ignition temperature, 2: 174
 - Inflammability, limits of, 2: 181
 - Ionization by α -particles, 6: 122
 - Ionization by β -particles, 6: 121
 - Ionization by γ -rays, 6: 123
 - Magnetic susceptibility, 6: 361
 - Orthobaric density, 3: 231
 - Polarization of light scattered by, 5: 265
 - Refractivity, 7: 10
 - Solubility in non-aqueous liquids, 3: 269
 - Sound, velocity of, in, 6: 463
 - Specific heat
 - Gas, 5: 80
 - Solid, 5: 95
 - Thermal expansion, 3: 16
 - Vapor pressure, 3: 214, 216
 - Vapor pressure above 1 atm., 3: 231
 - Viscosity, gas, 5: 3
- Cyanogen bromide**
 - Electrical conductivity, 6: 143
 - Vapor pressure, 3: 207
- Cyanogen chloride**
 - Boiling point, 3: 232
 - Density, 3: 23
 - Heat of formation, 5: 182
 - Heat of vaporization, 5: 136
 - Solubility in water, 3: 387
 - Vapor pressure
 - Liquid, 3: 214
 - Solid, 3: 207
 - Vapor pressure above 1 atm., 3: 232
- Cyanogen iodide**
 - Dissociation pressure, 7: 245
 - Free energy, 7: 245
 - Formation, 7: 245
 - Heat of dissociation, 7: 245
 - Heat of formation, 5: 182
- Cyanotrichite**
 - Density, 1: 137
 - Refractive index, 1: 137, 171
- Cyanuric acid**
 - Absorption spectra, ultra-violet, 5: 336, 367
 - Electrical conductivity, aqueous solution, 6: 263
 - Heat of formation, 5: 182
 - Heat of solution in water, 5: 148
 - Magnetic susceptibility, 6: 361
 - Specific heat, 5: 102
- Pyridine
 - Density, 3: 162
 - Viscosity, 5: 39
- Cyclamin, optical rotatory power, 7: 387**
- Cyclene, heat of combustion, 5: 163**

Cyclobutanecarboxylic acid

- Refractive index, 7: 37
- Viscosity, 7: 216
- Cyclobutylcarbinol**
 - Heat of combustion, 5: 164
- Cycloheptane, heat of combustion, 5: 163**
- Cycloheptene, heat of combustion, 5: 163**
- Cycloheptanecarboxylic acid**
 - Heat of combustion, 5: 165
- Cycloheptanol, heat of combustion, 5: 164**
- Cycloheptylmethylcarbinol**
 - Heat of combustion, 5: 164
- 1, 3-Cyclohexadiene**
 - Absorption spectra, 5: 339
 - Azeotropic mixtures, 3: 319-321, 323
 - Magnetic susceptibility, 6: 362
- 1, 4-Cyclohexadiene**
 - Absorption spectra, 5: 339
 - Magnetic susceptibility, 6: 362
- Cyclohexan-1, 2-diol**
 - Electrical conductivity, aqueous solution, 6: 276
 - Heat of combustion, 5: 164
- Cyclohexan-1, 4-dione**
 - Ethyl alcohol
 - Density, 7: 81
 - Refractive index, 7: 81
 - Dispersion, 7: 103
- Cyclohexane**
 - Absorption spectra, 5: 332, 340
 - Azeotropic mixtures, 3: 319-321, 323, 324
 - Birefringence, 7: 111
 - Boiling point, 3: 222, 345
 - Compressibility, 3: 36, 39
 - Critical point data, 3: 244, 249
 - Cryoscopic constant, 4: 183
 - Density, 3: 29, 33
 - Dielectric constant, 6: 91
 - Flash point, 2: 161
 - Formation from benzene, 7: 246
 - Heat of combustion, 5: 163
 - Heat of vaporization, 5: 137
 - Magnetic susceptibility, 6: 362
 - Orthobaric density, 3: 244
 - Polarization of light scattered by
 - Gas, 5: 266
 - Liquid, 5: 267
 - Refractive index, 7: 40
 - Specific heat, gas, 5: 81
 - Surface tension, 4: 455
 - Thermal conductivity, gas, 5: 214
 - Vapor pressure
 - Liquid, 3: 222
 - Solid, 3: 208
 - Vapor pressure above 1 atm., 3: 244
 - Viscosity, 7: 217, 223
- Acetic acid*
- Acetone*
- Acetophenone*
- Anethole*
- Aniline*
- Antimony tribromide*
- Antimony trichloride*
- Benzene*
- Benzene hexachloride*
- Benzil*
- Benzophenone*
- α -Bromonaphthalene*
- Cetyl palmitate*
- Chloroform*
- Cyclohexanone
 - Boiling point elevation, 3: 345
- Diisobutylammonium dichloroacetate
 - Boiling point elevation, 3: 346
- 1, 6-Dimethyldodecahydronaphthalene
 - Vapor pressure, 3: 289
- 2, 6-Dimethyldodecahydronaphthalene
 - Vapor pressure, 3: 289
- Diphenyl
 - Boiling point elevation, 3: 346

* Data for system will be found under this compound in Index. Full explanation on page vii.

Cyclohexane.—(Continued)

- Ethyl alcohol
 - Viscosity, **5**: 38
- Ethylene bromide
 - Density, **3**: 155
 - Freezing point-solubility, **4**: 107
 - Heat of solution, **5**: 156
- Hexane
 - Heat of fusion, **5**: 157
- Methyl alcohol
 - Solubility, mutual, **3**: 395, 397
- o-Methylcyclohexanone
 - Boiling point elevation, **3**: 345
- Methyldecahydronaphthalene (1-, 2-)
 - Vapor pressure, **3**: 289
- Methylene iodide
 - Solubility, mutual, **3**: 397
- Naphthalene
 - Boiling point elevation, **3**: 346
- m-Nitrotoluene
 - Density, **7**: 85
 - Refractive index, **7**: 85
 - Dispersion, **7**: 104
- Phenyl benzoate
 - Boiling point elevation, **3**: 346
- Piperidine
 - Freezing point-solubility, **4**: 174
- Stilbene
 - Boiling point elevation, **3**: 346
- Sulfur dioxide
 - Freezing point-solubility, **4**: 187
 - Solubility, mutual, **3**: 394
- Toluene
 - Heat of solution, **5**: 157
- m-Toluidine
 - Density, **7**: 85
 - Refractive index, **7**: 85
 - Dispersion, **7**: 104
- p-Toluidine chloroacetate
 - Boiling point elevation, **3**: 346
- p-Toluidine salicylate
 - Boiling point elevation, **3**: 346
- Triphenylmethane
 - Boiling point elevation, **3**: 346
- p-Xylene
 - Heat of solution, **5**: 157
- Cyclohexaneacetic acid, electrical conductivity, aqueous solution, **6**: 288
- 1, 2-Cyclohexanedicarboxylic acid
 - Heat of combustion, **5**: 165
- Cyclohexanol
 - Azeotropic mixtures, **3**: 319–323
 - Birefringence, electric, **7**: 111
 - Compressibility, **3**: 36
 - Cryoscopic constant, **4**: 183, 215
 - Density, **3**: 29, 33
 - Dielectric constant, **6**: 91
 - Flash point, **2**: 161
 - Heat of combustion, **5**: 164
 - Heat of fusion, **5**: 133
 - Heat of solution in water, **5**: 150
 - Heat of vaporization, **5**: 137
 - Magnetic susceptibility, **6**: 362
 - Refractive index, **7**: 40
 - Specific heat, **5**: 110
 - Surface tension, **4**: 436, 455
 - Viscosity, **7**: 218
 - X-rays, absorption coefficient, **6**: 14, 16
- Cyclohexanone
 - Absorption spectra, **5**: 340
 - Compressibility, **3**: 36
 - Density, **3**: 29
 - Dielectric constant, **6**: 90
 - Magnetic susceptibility, **6**: 362
 - Refractive index, **7**: 39
 - Specific heat, **5**: 110
 - Viscosity, **7**: 217
- Acetone*
- Benzene*
- Chloroform*
- Cyclohexane*

Cyclohexanone.—(Continued)

- Ethyl acetate
 - Vapor pressure, **3**: 289
- Ethyl alcohol
 - Vapor pressure, **3**: 288
- Naphthalene
 - Density, **7**: 85
 - Refractive index, **7**: 85
- Phenol
 - Freezing point-solubility, **4**: 135
- Trichloroethylene
 - Vapor pressure, **3**: 287
- Cyclohexene
 - Absorption spectra, **5**: 340
 - Azeotropic mixtures, **3**: 319–321, 323
 - Heat of combustion, **5**: 163
 - Heat of vaporization, **5**: 137
 - Heat of wetting by, **5**: 142
 - Magnetic susceptibility, **6**: 362
 - Refractive index, **7**: 39
- Chloroform*
- Ethylene bromide
 - Heat of solution, **5**: 156
- Cyclohexene-1-acetic acid
 - Heat of combustion, **5**: 165
- α -Cyclohexene-1-propionic acid
 - Heat of combustion, **5**: 165
- Cyclohexenol
 - Magnetic susceptibility, **6**: 362
- Cyclohexyl aminobenzoate
 - Cryoscopic constant, **4**: 184
- Cyclohexyl chloride
 - Heat of vaporization, **5**: 137
- Cyclohexylacetic acid
 - Refractive index, **7**: 44
- Cyclohexylcarbinol
 - Heat of combustion, **5**: 164
- Cyclohexylideneacetic acid
 - Heat of combustion, **5**: 165
- Cyclooctanecarboxylic acid
 - Heat of combustion, **5**: 165
- Cyclopentadiene
 - Absorption spectra, **5**: 337, 363
 - Birefringence, electric, **7**: 111
 - Surface tension, **4**: 452
- Cyclopentan-1, 2-diol
 - Heat of combustion, **5**: 164
- Cyclopentane
 - Absorption spectra, **5**: 338
 - Boiling point, **3**: 342
 - Heat of combustion, **5**: 163
 - Viscosity, **7**: 216
- Aniline*
- Benzylideneacetone*
- Diphenyl
 - Boiling point elevation, **3**: 342
- Resorcinol diethyl ether
 - Boiling point elevation, **3**: 342
- Cyclopentanone
 - Refractive index, **7**: 37
 - Viscosity, **7**: 216
- Cyclops metal, **2**: 375, 604
- Cyclose, optical rotatory power, **7**: 387
- Cylinders, circular, air forces on, **1**: 408
- Cymbal metal, **2**: 375; cf. 555, 601
- Cymene
 - Absorption spectra, **5**: 333, 346
 - Azeotropic mixtures, **3**: 320, 322
 - Boiling point, **3**: 226
 - Density, **3**: 30, 34
 - Electrical conductivity, **6**: 144
 - Heat of combustion, **5**: 163
 - Magnetic susceptibility, **6**: 363
 - Photoluminescence, **5**: 387
 - Refractive index, **7**: 51
 - Surface tension, **4**: 460
 - Thermal conductivity, **5**: 228
 - Vapor pressure, **3**: 226
 - Verdet constant, **6**: 430

o-Cymene

- Specific heat, **5**: 112
- Viscosity, **7**: 221
- p-Cymene
 - Boiling point, **3**: 347
 - Dielectric constant, **6**: 95
 - Heat of vaporization, **5**: 138
 - Surface tension, **4**: 437
 - Viscosity, **7**: 223
- Antimony tribromide*
- Antimony trichloride*
- Benzil*
- Diphenylamine
 - Boiling point elevation, **3**: 347
- Ethylene bromide
 - Heat of solution, **5**: 156
- Quinoline
 - Density, **7**: 87
 - Refractive index, **7**: 87
 - Dispersion, **7**: 106
- Cyprus, weights and measures, **1**: 5
- Cyprus bronze, **2**: 375, 562
- Cypress wood
 - Density, **2**: 313
 - Emission, spectral, **5**: 244
 - Thermal conductivity, **2**: 313
- Cysteine, optical rotatory power, **7**: 374
- Cystine
 - Heat of combustion, **5**: 169
 - Optical rotatory power, **7**: 374
- Cytidine, optical rotatory power, **7**: 475
- Cytisine
 - Absorption spectra, ultra-violet, **5**: 372
 - Crystallography, **1**: 331
 - Optical rotatory power, **7**: 475
- Czechoslovakia, weights and measures, **1**: 5
- Dahllite
 - Density, **1**: 144
 - Refractive index, **1**: 144, 167
- Daimler bearing (alloy), **2**: 375
- Dalton, definition, **1**: 35
- Dalton-Weilermann formula (evaporation), **5**: 54
- Damar (alloy), **2**: 375; cf. 562
- Damascus bronze, **2**: 375; cf. 562
- Danburite
 - Density, **1**: 145
 - Refractive index, **1**: 145, 171; **7**: 25
- Dandelion metal, **2**: 375
- Daniell cell, **6**: 318
- Daphnite, refractive index, **1**: 138, 171
- Darapskite
 - Density, **1**: 150
 - Refractive index, **1**: 150, 168
- Darwin-Compton formula (scattering function), **6**: 19
- Datolite
 - Density, **1**: 145
 - Refractive index, **1**: 145, 172
- Daucine
 - Optical rotatory power, **7**: 475
- Davis metal, **2**: 375
- Dawsonite
 - Density, **1**: 153
 - Refractive index, **1**: 153, 170
- Day, definition, **1**: 35, 391
- Debye-Thomson formula (scattering function), **6**: 19
- Decacyclene
 - Aniline*
 - Nitrobenzene
 - Boiling point elevation, **3**: 343
- Decahydronaphthalene
 - Boiling point, **3**: 347
 - Flash point, **2**: 161
 - Heat of combustion, **5**: 164
 - Specific heat, **5**: 112
 - Vapor pressure, **3**: 226
 - Viscosity, **5**: 41; **7**: 221
- Acetic acid*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Decahydronaphthalene.—(Continued)

- Anthracene**
- Butyl alcohol**
- Iodine*
- Distribution coefficients in water, **3**: 420
- Decalin.** See Decahydronaphthalene.
- Decane**
 - Absorption spectra, **5**: 333
 - Compressibility, **3**: 37
 - Density, **3**: 30
 - Dielectric constant, **6**: 95
 - Heat of combustion, **5**: 164
 - Heat of vaporization, **5**: 138
 - Magnetic susceptibility, **6**: 363
 - Refractive index, **7**: 53
 - Specific heat, **5**: 113
 - Verdet constant, **6**: 430
 - Viscosity, **5**: 49; **7**: 221
- Phosphorus*
- Solubility, mutual, **3**: 394
- Decanedicarboxylic acid**
 - Heat of combustion, **5**: 166
- Declination**, magnetic, definition, **1**: 35; **6**: 445
- Decomposition pressure**, **7**: 224
- β -Decyl esters**
 - Optical rotatory power, **7**: 361
- Decylene**
 - Absorption spectra, **5**: 333
 - Dielectric constant, **6**: 95
 - Specific heat, **5**: 113
 - Verdet constant, **6**: 430
- Decylic acid**
 - Surface tension, aqueous solution, **4**: 470
 - Time, variation with, **4**: 474
- Hydrochloric acid*
- Surface tension, **4**: 470
- Definitions**, **1**: 34; **2**: viii
- Deflagration test** (explosives), **7**: 489
- Degree**, definition, **1**: 36
- Degussa alloy**, **2**: 375; cf. 556, 601
- Delatot's metal**, **2**: 375
- Delhi iron**, **2**: 375
- Delta metal**, **2**: 375; cf. 464, 556, 602
- Demal**, definition, **1**: 36
- Demo bronze**, **2**: 375, 562
- Denmark**, weights and measures, **1**: 5
- Density**
 - Abrasive materials, **2**: 87
 - Air, moist, **1**: 71
 - Building stones, **2**: 52
 - Chemical compounds, **1**: 106, 176, 313, 341
 - Clays, **2**: 57, 58
 - Conversion factors, **1**: 23
 - Definition, **1**: 36
 - Determination of, **1**: 78
 - Enamels, vitreous, **2**: 115
 - Fibers, vegetable, **2**: 237
 - Fuel gases, **2**: 167
 - Fuels, solid, **2**: 135
 - Gas oil, **2**: 140
 - Gases and vapors, **3**: 3, 435
 - Gasoline, **2**: 140, 145
 - Glass, **2**: 92, 93, 102
 - Kerosene, **2**: 140
 - Latex, **2**: 255
 - Liquids and vitreous solids
 - Compounds, **3**: 22
 - Elements, **1**: 102, 340; **2**: 456, 463; **3**: 20, 35
 - Lubricating oils, **2**: 140, 145
 - Metals, **2**: 463
 - Oils, fats and waxes, **2**: 201, 214
 - Orthobaric, **3**: 202, 228, 237, 244
 - Paraffins, **2**: 145
 - Petroleum, **2**: 137, 144
 - Phenol resins, **2**: 299, 300
 - Pigments for paint industry, **2**: 317
 - Pitches, **2**: 171
 - Plastics, **2**: 296
 - Porcelains, **2**: 68, 75

Density.—(Continued)

- Refractory materials, **2**: 82
- Refrigerating brines, **2**: 327
- Rubber, **2**: 255, 259, 300
- Soap solutions, **5**: 447
- Solid solutions, metallic, **2**: 358
- Solids
 - Compounds, **3**: 43, 45
 - Elements, **2**: 456; **3**: 21
- Solutions and mixtures
 - Aqueous, **3**: 51, 95, 111, 125
 - Maximum density, **3**: 107
 - Saturated, **3**: 104
- Gases, **3**: 17
- Non-aqueous, **2**: 358; **3**: 130
- Stellar, **1**: 385
- Tar distillates, **2**: 171
- Tars, **2**: 170
- Thermal insulating materials, **2**: 312
- Vulcanized fiber, **2**: 300
- Whiteware, **2**: 75
- Woods, **2**: 1, 46
- Dental cement**
 - Composition, **2**: 129
 - Crushing strengths, **2**: 129
 - Setting time, **2**: 129
- Derbylite**
 - Density, **1**: 129
 - Refractive index, **1**: 129, 168
- Desaurin**
 - Ethylene bromide*
 - Boiling point elevation, **3**: 335
- Descloizite**
 - Density, **1**: 135
 - Refractive index, **1**: 135, 173
- Desmid earth.** See Diatomaceous earth.
- Desmine**, dehydration behavior, **7**: 312
- Desoxycholic acid**
 - Optical rotatory power, **7**: 467
- Destinezite**
 - Density, **1**: 129
 - Refractive index, **1**: 129, 171
- Detonation**, **2**: 162, 184
- Detonation velocity**
 - Explosives, **7**: 489
 - Formulas, **2**: 187
- Developers**, photographic, **5**: 438
- Dew-point**, definition, **1**: 37; **2**: 149
- Dewindtite**, density, **1**: 134
- Dewrance metal**, **2**: 375
- Dextrin**
 - Diffusion in water, **5**: 72
 - Heat of combustion, **5**: 167
 - Heat of solution in water, **5**: 150
 - Heat of wetting, **5**: 143
 - Optical rotatory power, **7**: 401
 - Osmotic pressure, **4**: 430
 - Specific heat, **5**: 103
 - Viscosity, **2**: 221
- Dextrose.** See *d*-Glucose.
- Diabase**
 - Bulk density, **2**: 52
 - Compressibility, **2**: 54; **3**: 51
 - Compressive strength, **2**: 47
 - Elasticity, **2**: 52
 - Hardness, **2**: 50
 - Impact hardness, **2**: 51
 - Porosity, **2**: 53
 - Thermal expansion, **2**: 55
- Diacetal**
 - Magnetic susceptibility, **6**: 363
 - Refractive index, **7**: 58
 - Verdet constant, **6**: 430
- Diacetin**, saponification constants, **7**: 135
- Diacetone alcohol**
 - Decomposition, kinetics of, **7**: 121
- Diacetyl**
 - Absorption spectra, **5**: 337, 377
 - Electrical conductivity, aqueous solution, **6**: 266
 - Refractive index, **7**: 36

Diacetyl bromohydroquinol

- Diacetylchlorohydroquinol*
- Freezing point-solubility, **4**: 158
- Diacetylphenolphthalein**
 - Optical rotatory power, **7**: 354
- Diacetyltartaric acid**
 - Density, aqueous solution, **3**: 114
 - Electrical conductivity, aqueous solution, **6**: 287
 - Optical rotatory power, **7**: 382
 - Viscosity, aqueous solution, **5**: 21
- Diadochite**
 - Density, **1**: 129
 - Refractive index, **1**: 129, 165
- Diallyl**
 - Absorption spectra, **5**: 340, 364
 - Heat of combustion, **5**: 163
 - Magnetic susceptibility, **6**: 362
 - Refractive index, **7**: 39
- Diallyl oxalate**
 - Specific heat, **5**: 112
- Benzene**
- Diallyl sulfide**
 - Absorption spectra, **5**: 332
 - Dielectric constant, **6**: 91
 - Refractive index, **7**: 39
- Diallyl succinate**, specific heat, **5**: 112
- Diallylacetone**, refractive index, **7**: 47
- Diallylcarbinol**, heat of combustion, **5**: 164
- Diallylmalonic acid**
 - Decomposition, kinetics of, **7**: 122
 - Electrical conductivity, aqueous solution, **6**: 292
- Diallylmethylcarbinol**
 - Heat of combustion, **5**: 164
 - Refractive index, **7**: 44
- Diallylpropylcarbinol**
 - Heat of combustion, **5**: 164
 - Refractive index, **7**: 53
- Diamagnetism**, theory, **6**: 349
- 1, 5-Diaminoanthraquinone**
 - Quinoline*
 - Boiling point elevation, **3**: 346
- Diammonium lanthanum nitrate**
 - Lanthanum iodate*
 - Solubility in water, **7**: 338
- Diamond**
 - Compressibility, **3**: 46
 - Contact charge, **6**: 57
 - Dielectric constant, **6**: 75, 99
 - Electrical conductivity, **6**: 153
 - Emission, spectral, **5**: 257, 258
 - Entropy, **5**: 87
 - Free energy, **7**: 243
 - Heat content, **5**: 87; **7**: 243
 - Luminescence, **5**: 389
 - Pyroelectric constant, **6**: 209
 - Refractive index, **7**: 12, 14, 18
 - Specific heat, **5**: 85, 87, 94
 - Thermal conductivity, **5**: 216, 217, 231, 233
 - Thermodynamic potential, **5**: 87
 - Transmission of radiant energy, **5**: 269
 - Verdet constant, **6**: 426
 - See also Carbon.
- Diamond bronze**, **2**: 375
- Diamond green**, refractive index, **7**: 12, 15
- Di-act.-amyl chlorofumarate**
 - Surface tension, **4**: 462
- Di-act.-amyl citraconate**
 - Surface tension, **4**: 462
- Diamyl malate**, surface tension, **4**: 462
- Di-act.-amyl maleate**
 - Surface tension, **4**: 462
- Di-act.-amyl malonate**
 - Surface tension, **4**: 461
- Diamyl mercury**
 - Magnetic susceptibility, **6**: 357
- Di-act.-amyl mesaconate**
 - Surface tension, **4**: 462

* Data for system will be found under this compound in Index. Full explanation on page vii.

Di-act.-amyl phthalate
Surface tension, 4: 462

Di-act.-amyl succinate
Surface tension, 4: 462

Diamylamine
Birefringence, electric, 7: 111
Dielectric constant, 6: 95

Diamylammonium chloride
-*Chloroform**

Diamylene
Heat of combustion, 5: 164
Specific heat, 5: 112

Dianthracene
Decomposition, kinetics of, 7: 121
Heat of combustion, 5: 164

Diaphone, 6: 456

Diaphorite, density, 1: 124

Diaphragm brass, 2: 375

Diaspore
Density, 1: 136
Electrical conductivity, 2: 86
Melting point, 1: 136
Refractive index, 1: 136, 172

Diatomaceous earth
Density, 2: 87, 316
Hardness, 2: 87
Moisture content at various humidities, 2: 316, 324
Thermal conductivity, 2: 87, 315, 316
Thermal conductivity under reduced pressures, 2: 315

Diatomic molecular spectra, 5: 409

Diatomite. See Diatomaceous earth.

Diazo compounds, hydrolysis of, 7: 141

Diazoaminobenzene
Absorption spectra, 5: 348
Intramolecular transformation, 7: 118

Diazotization, kinetics of, 7: 142

Dibenzalacetone
Absorption spectra, 5: 352
-*Chloroacetic acid**
-*Trichloroacetic acid*
Freezing point-solubility, 4: 105

Dibenzoylacetone, surface tension, 4: 462

Dibenzoylmethane, refractive index, 7: 30

Dibenzyl
Absorption spectra, 5: 350, 378
Cryoscopic constant, 4: 184
Diffusion in benzene, 5: 74
Heat of combustion, 5: 164
Heat of fusion, 5: 134
Melting point under pressure, 4: 16
Specific heat, 5: 104
Verdet constant, 6: 431
Volume change on melting, 4: 16
-*Acetonitrile**
-*Antimony tribromide**
-*Antimony trichloride**
-*Azobenzene**
-*Benzalaniline**
-*Benzil**
-*Benzoin**
-*Benzylaniline**
-*Benzylphenol**
-*Hydrazobenzene*
Freezing point-solubility, 4: 161
-*Phosgene*
Boiling point elevation, 3: 330
-*Picric acid*
Freezing point-solubility, 4: 121
-*Stilbene*
Density, 3: 195
Freezing point-solubility, 4: 163
Viscosity, 5: 51
-*Styphnic acid*
Freezing point-solubility, 4: 122
-*Tolane*
Freezing point-solubility, 4: 163

Dibenzyl ketone
Absorption spectra, 5: 351
Boiling point, 3: 227
Vapor pressure, 3: 227

Dibenzyl mercury
Absorption spectra, solutions, 5: 328

Dibenzyl sulfide
Verdet constant, 6: 431

Dibenzyl sulfoxide
Absorption spectra, 5: 350
-*Chloroform**

Dibenzylacetic acid
Electrical conductivity, aqueous solution, 6: 301
Heat of combustion, 5: 166

Dibenzylacetic anhydride
Heat of combustion, 5: 166

Dibenzylamine
Absorption spectra, 5: 334, 350
Density, 3: 30
Dielectric constant, 6: 96
Diffusion in methyl alcohol, 5: 73
Electrical conductivity, 6: 146
Heat of combustion, 5: 168
Refractive index, 7: 60
Surface tension, 4: 461
Verdet constant, 6: 431
Viscosity, 7: 221

Dibenzylammonium chloride
-*Chloroform**

Dibenzylbutadiene
Heat of combustion, 5: 164

Dibenzylhydrazine
-*Benzalazine**
-*Cinnamylideneaniline**
-*Diphenylbutadiene*
Freezing point-solubility, 4: 164

Dibenzylideneacetone
-*Isoamyl acetate*
Density, 3: 190
Viscosity, 5: 50

Dibenzylpiperazine
-*Benzene**
-*Ethyl alcohol*
Density, 7: 82
Refractive index, 7: 82

2, 4-Dibromoacetanilide
-*4-Bromo-2-chloroacetanilide**

Dibromoacetic acid
Heat of solution in water, 5: 148, 159

2, 4-Dibromoaniline
-*Isoamyl acetate*
Density, 3: 174
Viscosity, 5: 43

2, 6-Dibromoaniline
-*Isoamyl acetate*
Density, 3: 174

9, 10-Dibromoanthracene
-*Quinoline*
Density, 7: 88
Refractive index, 7: 88
Dispersion, 7: 107

***o*-Dibromobenzene**
Absorption spectra, 5: 338
Heat of fusion, 5: 132
Specific heat
Liquid, 5: 109
Solid, 5: 103
-*Dibromobenzene (m-, p-)*
Freezing point-solubility, 4: 168, 175

***m*-Dibromobenzene**
Absorption spectra, 5: 338
Dielectric constant, 6: 89
Heat of fusion, 5: 132
Refractive index, 7: 38
Specific heat
Liquid, 5: 109
Solid, 5: 103
-**o*-Dibromobenzene**

***m*-Dibromobenzene.**—(Continued)
-*Quinoline*
Density, 7: 84
Refractive index, 7: 84
Dispersion, 7: 104

***p*-Dibromobenzene**
Absorption spectra, 5: 338
Cryoscopic constant, 4: 183
Dielectric constant, 6: 89
Diffusion in benzene, 5: 74
Diffusion in methyl alcohol, 5: 72
Heat of fusion, 5: 132
Refractive index, 7: 38
Specific heat, 5: 103
Transition temperature, 4: 8
Vapor pressure, 3: 209
-*Aluminum bromide**-*Carbon disulfide*
-*Aniline**
-*Antimony tribromide**
-*Antimony trichloride**
-*Benzene**
-*Bromobenzene**
-*p-Bromochlorobenzene**
-*p-Bromoiodobenzene**
-*p-Bromotoluene**
-*tert.-Butyl alcohol**
-*Camphor**
-*Carbon disulfide**
-*Carbon tetrachloride**
-*Chloroform**
-*Chloronitrobenzene (m-, p-)**
-*o-Dibromobenzene**
-*p-Dichlorobenzene*
Freezing point-solubility, 4: 123
-*p-Diiodobenzene*
Freezing point-solubility, 4: 123
-*Ethyl acetate*
Density, 3: 166
-*Ethyl alcohol*
Density, 3: 159
Freezing point-solubility, 4: 110
-*Ethyl bromide*
Density, 3: 157
-*Ethyl butyrate*
Density, 3: 173
-*Ethyl chloride*
Boiling point elevation, 3: 336
-*Ethyl chloroacetate*
Density, 3: 165
-*Ethyl ether*
Density, 3: 168
Freezing point-solubility, 4: 174
-*Ethyl propionate*
Density, 3: 172
-*Ethylene bromide*
Density, 3: 155
-*Hexane*
Density, 3: 173
-*Iodine*
Freezing point lowering, 4: 37
Freezing point-solubility, 4: 34
-*Isoamyl acetate*
Density, 3: 173
-*Isobutyl alcohol*
Freezing point-solubility, 4: 115
-*Methyl acetate*
Density, 3: 164
-*Methyl benzoate*
Density, 3: 173
-*Methyl butyrate*
Density, 3: 172
-*Methyl formate*
Density, 3: 157
-*Methyl propionate*
Density, 3: 167
-*Nitrobenzene*
Freezing point-solubility, 4: 175
-*Paraldehyde*
Density, 3: 173
-*Phosgene*
Boiling point elevation, 3: 330

* Data for system will be found under this compound in Index. Full explanation on page vii.

p-Dibromobenzene.—(Continued)

- Phosphorus
 - Solubility, mutual, **3**: 394
- Propyl alcohol
 - Freezing point-solubility, **4**: 112
- Propyl butyrate
 - Density, **3**: 173
- Toluene
 - Density, **3**: 173
 - Freezing point-solubility, **4**: 175
 - Specific heat, **5**: 127
- 2, 3-Dibromobutane**
 - Dielectric constant, **6**: 87
- Dibromocamphors**
 - Crystallography, **1**: 330
 - Optical rotatory power, **7**: 437
 - Verdet constant, **6**: 430
- Dibromochlorocamphor**
 - Verdet constant, **6**: 430
- Dibromocinnamic acid**
 - Ethyl alcohol
 - Density, **7**: 81
 - Refractive index, **7**: 81
 - Dispersion, **7**: 103
- 1, 1-Dibromoethane**
 - Azeotropic mixtures, **3**: 319
 - Refractive index, **7**: 34
- Nitrobenzene
 - Birefringence, magnetic, **7**: 112
- 1, 2-Dibromoethane.** See Ethylene bromide.
- Dibromoethylene**
 - Absorption spectra, ultra-violet, **5**: 368
 - Magnetic susceptibility, **6**: 361
- Benzene*
 - Xylene
 - Density, **3**: 153
- 2, 7-Dibromofluorene**
 - Quinoline
 - Density, **7**: 87
 - Refractive index, **7**: 87
 - Dispersion, **7**: 107
- Dibromofluoroacetic acid**, electrical conductivity, aqueous solution, **6**: 261
- 1, 2-Dibromo-2-fluoroethane**
 - Magnetic susceptibility, **6**: 361
- 1, 2-Dibromodiodoethylene**
 - Magnetic susceptibility, **6**: 361
- 1, 2-Dibromoisobutylene**
 - Verdet constant, **6**: 428
- 2, 3-Dibromoisopentane**
 - Verdet constant, **6**: 428
- Dibromomalonic acid**
 - Decomposition, kinetics of, **7**: 122
 - Heat of solution in water, **5**: 148
- 2, 7-Dibromo-9-methylfluorene**
 - Quinoline
 - Density, **7**: 88
 - Refractive index, **7**: 88
 - Dispersion, **7**: 107
- 1, 2-Dibromo-2-methylpropane**
 - Viscosity, **7**: 215
- Dibromonaphthalene**
 - Diffusion in benzene, **5**: 74
 - Diffusion in methyl alcohol, **5**: 73
- 1, 2-Dibromo-3-nitrobenzene**
 - 1, 2-Dibromo-4-nitrobenzene
 - Freezing point-solubility, **4**: 117
- 1, 3-Dibromo-2-nitrobenzene**
 - 1, 3-Dibromo-4-nitrobenzene
 - Freezing point-solubility, **4**: 117
- Dibromo-4-nitrophenol**
 - Magnetic susceptibility, **6**: 362
- 1, 5-Dibromopentane**, viscosity, **7**: 216
- 2, 4-Dibromophenol**, heat of fusion, **5**: 132
- 1, 2-Dibromopropane**
 - Azeotropic mixtures, **3**: 320
 - Dielectric constant, **6**: 85
 - Surface tension, **4**: 449
 - Verdet constant, **6**: 428
 - Viscosity, **7**: 214

1, 2-Dibromopropane.—(Continued)

- Ethylene bromide
 - Surface tension, **4**: 471
 - Vapor pressure, partial, **3**: 287
 - Viscosity, **5**: 36
- 1, 3-Dibromopropane**
 - Boiling point, **3**: 218
 - Vapor pressure, **3**: 218
 - Verdet constant, **6**: 428
 - Viscosity, **7**: 214
- α , α -**Dibromopropionic acid**
 - Electrical conductivity, aqueous solution, **6**: 263
 - Heat of solution in water, **5**: 148
- α , β -**Dibromopropionic acid**
 - Crystallization velocity, **5**: 61
 - Electrical conductivity, aqueous solution, **6**: 263
 - Melting point under pressure, **4**: 10
 - Optical rotatory power, **7**: 366
 - Surface tension, **4**: 449
 - Transition velocity, **5**: 61
- Acetone*
 - Benzene*
 - Chloroform*
 - Ethyl ether
 - Boiling point elevation, **3**: 341
 - Distribution coefficients in water, **3**: 425
- Xylene
 - Distribution coefficients in water, **3**: 425
- 1, 2-Dibromopropyl alcohol**
 - Dielectric constant, **6**: 85
- 2, 3-Dibromopropylene**
 - Boiling point, **3**: 217
 - Vapor pressure, **3**: 217
- Dibromosilane**, vapor pressure, **3**: 214
- α , β -**Dibromosuccinic acid**
 - Electrical conductivity, aqueous solution, **6**: 265
 - Optical rotatory power, **7**: 380
- Ethyl ether
 - Distribution coefficients in water, **3**: 426
- 1, 2-Dibromotetrachloroethane**
 - Magnetic susceptibility, **6**: 361
 - Transition temperature, **4**: 8
- Dibutyl mercury**
 - Magnetic susceptibility, **6**: 357
- Dibutyl oxalate**, specific heat, **5**: 112
- Dibutylamine**
 - Absorption spectra, **5**: 333
- Dicadmium magnesium chloride**
 - Refractive index, **1**: 142, 170
- Dicalcium diborate**, melting point, **4**: 84
- Dicalcium ferrite**
 - Decomposition temperature, **4**: 84
 - Melting point, **1**: 145
 - Refractive index, **1**: 145, 174
- Dicalcium lead propionate**
 - Refractive index, **1**: 144, 166; **7**: 24
- Dicalcium strontium propionate**
 - Refractive index, **1**: 147, 166; **7**: 26
- Dichloroacetal**
 - Diffusion in methyl alcohol, **5**: 73
- Dichloroacetamide**
 - Boiling point elevation in aqueous solution, **3**: 327
- Acetone*
 - Chloroform*
 - Ethyl alcohol
 - Boiling point elevation, **3**: 336
- Ethyl ether
 - Boiling point elevation, **3**: 341
- 2, 4-Dichloroacetanilide**
 - Acetic acid*
 - 4-Bromo-2-chloroacetanilide*
 - 4-Chloroacetanilide*
- Dichloroacetic acid**
 - Absorption spectra, **5**: 331
 - Activity coefficient, **7**: 245

Dichloroacetic acid.—(Continued)

- Azeotropic mixtures, **3**: 319
- Compressibility, aqueous solution, **3**: 440
- Density, **3**: 28
 - Aqueous solution, **3**: 111, 113
- Dielectric constant, **6**: 84
- Diffusion in methyl alcohol, **5**: 72
- Electrical conductivity, **6**: 143
 - Aqueous solution, **6**: 261
- Esterification constant, **7**: 138
- Free energy of ionization, **7**: 245
- Freezing point lowering of aqueous solution, **4**: 262
- Heat of fusion, **5**: 132
- Heat of solution in water, **5**: 148, 159
- Heat of vaporization, **5**: 136
- Ionization constant, **7**: 245
- Specific heat
 - Aqueous solution, **5**: 124
 - Liquid, **5**: 107
 - Solid, **5**: 102
- Surface tension, **4**: 448
 - Aqueous solution, **4**: 467
- Verdet constant, **6**: 428
- Viscosity, aqueous solution, **5**: 20
- Acetic acid*
 - Ammonium dichloroacetate*
 - Ammonium lactate*
 - Amylene*
 - β -Amylene*
 - Benzene*
 - Benzoic acid*
 - Chloroacetic acid*
 - Cinnamic acid*
 - Crotonic acid*
 - Dimethylpyrone
 - Freezing point-solubility, **4**: 105
- Ethyl ether
 - Distribution coefficients in water, **3**: 423
- Hydrogen chloride
 - Density, aqueous solution, **3**: 101
- Phenylacetic acid
 - Freezing point-solubility, **4**: 105
- Potassium dichloroacetate
 - Density, aqueous solution, **3**: 103
- Potassium lactate
 - Density, aqueous solution, **3**: 103
- Sodium dichloroacetate
 - Density, aqueous solution, **3**: 103
- Sodium lactate
 - Density, aqueous solution, **3**: 102
- Toluene
 - Density, **3**: 153
- Toluic acid (o-, m-, p-)
 - Freezing point-solubility, **4**: 105
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 101
- 1, 1-Dichloroacetone**
 - Absorption spectra, **5**: 336
 - Dielectric constant, **6**: 85
 - Surface tension, **4**: 436, 449
- 2, 4-Dichloroaniline**
 - Absorption spectra, **5**: 338
- Diphenylamine
 - Freezing point-solubility, **4**: 128
- Isoamyl acetate
 - Density, **3**: 176
 - Viscosity, **5**: 44
- 1, 4-Dichloroanthracene**
 - Quinoline
 - Density, **7**: 88
 - Refractive index, **7**: 88
 - Dispersion, **7**: 107
- 1, 5-Dichloroanthracene**
 - Quinoline
 - Density, **7**: 88
 - Refractive index, **7**: 88
 - Dispersion, **7**: 107

* Data for system will be found under this compound in Index. Full explanation on page vii.

9, 10-Dichloroanthracene-*Quinoline*Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107**Dichlorobenzene**-*Carbon tetrachloride****o-Dichlorobenzene**Absorption spectra, **5**: 338Birefringence, electric, **7**: 111Dielectric constant, **6**: 89Flash point, **2**: 161Heat of combustion, **5**: 169Heat of fusion, **5**: 132Refractive index, **7**: 38

Specific heat

Liquid, **5**: 109Solid, **5**: 103-*Acenaphthene**-*Benzene**-*Dichlorobenzene (m-, p-)*Freezing point-solubility, **4**: 168, 175-*Diethylamine*Distribution coefficients in water, **3**: 427**m-Dichlorobenzene**Absorption spectra, **5**: 338Birefringence, electric, **7**: 111Heat of fusion, **5**: 133Refractive index, **7**: 38

Specific heat

Liquid, **5**: 109Solid, **5**: 103Surface tension, **4**: 453-*Benzene**-*o-Dichlorobenzene****p-Dichlorobenzene**Absorption spectra, **5**: 338Cryoscopic constant, **4**: 183Dielectric constant, **6**: 89Diffusion in benzene, **5**: 74Diffusion in methyl alcohol, **5**: 72Flash point, **2**: 161Heat of fusion, **5**: 133Melting point under pressure, **4**: 10Refractive index, **7**: 38

Specific heat

Liquid, **5**: 109Solid, **5**: 103Surface tension, **4**: 453Transition temperature, **4**: 8Vapor pressure, **3**: 208-*Acenaphthene**-*Antimony tribromide**-*Antimony trichloride**-*p-Bromochlorobenzene**-*Chlorobenzene**-*p-Chloriodobenzene**-*p-Dibromobenzene**-*o-Dichlorobenzene**-*p-Diiodobenzene*Freezing point-solubility, **4**: 124-*Ethyl chloride*Boiling point elevation, **3**: 336-*Phosgene*Boiling point elevation, **3**: 330-*Phosphorus*Solubility, mutual, **3**: 394-*Sulfur*Freezing point-solubility, **4**: 35-*Sulfur dioxide*Boiling point elevation, **3**: 328**2, 3-Dichlorobenzoic acid**-*2, 5-Dichlorobenzoic acid*Freezing point-solubility, **4**: 144**2, 5-Dichlorobenzoic acid**-*m-Chlorobenzoic acid**-*2, 3-Dichlorobenzoic acid****Dichlorobromomethane**Azeotropic mixtures, **3**: 318Surface tension, **4**: 448**1, 2-Dichloro-1, 2-dibromoethane**Magnetic susceptibility, **6**: 361**1, 4-Dichloro-2, 3-dinitrobenzene**-*1, 4-Dichloro-2, 6-dinitrobenzene*Freezing point-solubility, **4**: 117**1, 4-Dichloro-2, 5-dinitrobenzene**-*1, 4-Dichloro-2, 6-dinitrobenzene*Freezing point-solubility, **4**: 117**1, 4-Dichloro-2, 6-dinitrobenzene**-*1, 4-Dichloro-2, 3-dinitrobenzene**-*1, 4-Dichloro-2, 5-dinitrobenzene****1, 1-Dichloroethane**Absorption spectra, **5**: 331Azeotropic mixtures, **3**: 319Birefringence, magnetic, **7**: 110Boiling point, **3**: 216, 335Electrical conductivity, **6**: 143

Refractive index

Gas, **7**: 10Liquid, **7**: 34Solubility in water, **3**: 387Specific heat, gas, **5**: 81Surface tension, **4**: 448Vapor pressure, **3**: 216Verdet constant, **6**: 428Viscosity, **7**: 213-*Benzil**-*Benzoic acid**-*Camphor**-*Diphenylamine*Boiling point elevation, **3**: 335-*Ethyl alcohol*Density, aqueous solution, **3**: 125-*Isovaleric acid*Boiling point elevation, **3**: 335-*Tetraethylammonium bromide*Boiling point elevation, **3**: 335-*Tetrahydronaphthalene*Vapor pressure, **3**: 287-*Tetrapropylammonium iodide*Boiling point elevation, **3**: 335-*Tribromoacetic acid*Boiling point elevation, **3**: 335**1, 2-Dichloroethane. See Ethylene chloride.****Di-(2-chloroethyl) sulfide**Density, **3**: 28Interfacial tension against various solutions, **4**: 438Melting point under pressure, **4**: 10Solubility in water, **3**: 261Surface tension, **4**: 436, 450Toxicology, **2**: 319Volume change on melting, **4**: 10-*Carbon tetrachloride**-*Di-(chloropropyl) sulfide*Freezing point-solubility, **4**: 115-*Dichlorohexane*Freezing point-solubility, **4**: 115-*Ethyl alcohol*Solubility, mutual, **3**: 395-*Gasolene*Solubility, mutual, **3**: 396-*Kerosene*Solubility, mutual, **3**: 396-*Ligroin*Solubility, mutual, **3**: 396-*Railroad light oil*Solubility, mutual, **3**: 396-*Sulfur*Freezing point-solubility, **4**: 35**1, 2-Dichloroethylene**Absorption spectra, **5**: 331, 335, 368Azeotropic mixtures, **3**: 319Boiling point, **3**: 216Dielectric constant, **6**: 84Flash point, **2**: 161Magnetic susceptibility, **6**: 361Solidification point, **1**: 61Vapor pressure, **3**: 216**1, 2-Dichloroethylene.—(Continued)**-*Benzophenone**-*Naphthalene*Boiling point elevation, **3**: 334Dichlorofluoroacetic acid, electrical conductivity, aqueous solution, **6**: 261**Dichlorohexane**-*Di-(2-chloroethyl) sulfide****1, 1'-Dichlorohydrin**Diffusion in methyl alcohol, **5**: 72Electrical conductivity, **6**: 143**2, 6-Dichlorohydroquinol**Heat of combustion, **5**: 169**1, 3-Dichloro-2-hydroxypropane**Magnetic susceptibility, **6**: 361**1, 1'-Dichloroisopropyl alcohol**Azeotropic mixtures, **3**: 320Dielectric constant, **6**: 85**Dichloromalonic acid**Decomposition, kinetics of, **7**: 122**Dichloromethane**Boiling point, **3**: 332Specific heat, gas, **5**: 80-*Bromoacetic acid**-*Diethylammonium bromide*Boiling point elevation, **3**: 332-*Diethylammonium chloride*Boiling point elevation, **3**: 332-*Diethylammonium nitrate*Boiling point elevation, **3**: 332-*Dimethylpyrone*Boiling point elevation, **3**: 333-*Dimethylpyrone picrate*Boiling point elevation, **3**: 333-*Ethyltripropylammonium iodide*Boiling point elevation, **3**: 333-*Naphthalene*Boiling point elevation, **3**: 333-*Picric acid*Boiling point elevation, **3**: 332-*Salicylic acid*Boiling point elevation, **3**: 333-*Tetraamylammonium iodide*Boiling point elevation, **3**: 333-*Tetraethylammonium bromide*Boiling point elevation, **3**: 333-*Tetraethylammonium chloride*Boiling point elevation, **3**: 333-*Tetraethylammonium nitrate*Boiling point elevation, **3**: 333-*Tetrapropylammonium iodide*Boiling point elevation, **3**: 333-*Tetrapropylammonium nitrate*Boiling point elevation, **3**: 333-*p-Toluidine*Boiling point elevation, **3**: 333-*p-Toluidine chloroacetate*Boiling point elevation, **3**: 333-*p-Toluidine salicylate*Boiling point elevation, **3**: 333-*Triamylammonium picrate*Boiling point elevation, **3**: 333-*Triethylammonium bromide*Boiling point elevation, **3**: 333-*Triethylammonium chloride*Boiling point elevation, **3**: 333-*Triethylammonium nitrate*Boiling point elevation, **3**: 333**Dichloromethylsilicane**Density, gas, **3**: 3**Dichloronaphthalene**Absorption spectra, **5**: 345Diffusion in benzene, **5**: 74Diffusion in methyl alcohol, **5**: 73Refractive index, **7**: 49-*Benzene****1, 4-Dichloronaphthalene**Refractive index, **7**: 49-*Amyl benzoate**

1, 4-Dichloronaphthalene.—(Continued)

- Diethyl phthalate*
Density, **7**: 89
Refractive index, **7**: 89
Dispersion, **7**: 108
- Diethylaniline*
Density, **7**: 89
Refractive index, **7**: 89
Dispersion, **7**: 108
- Quinoline*
Density, **7**: 87
Refractive index, **7**: 87
Dispersion, **7**: 106
- Tetralin*
Density, **7**: 89
Refractive index, **7**: 89
Dispersion, **7**: 108
- 1, 5-Dichloronaphthalene**
-*Quinoline*
Density, **7**: 87
Refractive index, **7**: 87
Dispersion, **7**: 106
- 1, 7-Dichloronaphthalene**
Refractive index, **7**: 49
-*Quinoline*
Density, **7**: 87
Refractive index, **7**: 87
Dispersion, **7**: 106
- 1, 8-Dichloronaphthalene**
Refractive index, **7**: 49
-*Quinoline*
Density, **7**: 87
Refractive index, **7**: 87
Dispersion, **7**: 106
- 2, 7-Dichloronaphthalene**
-*Quinoline*
Density, **7**: 87
Refractive index, **7**: 87
Dispersion, **7**: 106
- 1, 2-Dichloro-3-nitrobenzene**
-1, 2-Dichloro-4-nitrobenzene
Freezing point-solubility, **4**: 118
- 1, 2-Dichloro-4-nitrobenzene**
Surface tension, **4**: 453
-1, 2-Dichloro-3-nitrobenzene*
- 1, 3-Dichloro-2-nitrobenzene**
-1, 3-Dichloro-4-nitrobenzene
Freezing point-solubility, **4**: 118
- 1, 3-Dichloro-4-nitrobenzene**
Surface tension, **4**: 453
-1, 3-Dichloro-2-nitrobenzene*
-1-3-Dichloro-5-nitrobenzene
Freezing point-solubility, **4**: 118
- 1, 3-Dichloro-5-nitrobenzene**
-1, 3-Dichloro-4-nitrobenzene*
- 1, 4-Dichloro-2-nitrobenzene**
Surface tension, **4**: 453
- Dichloropentane, viscosity, **7**: 216
- 9, 10-Dichlorophenanthrene**
-*Quinoline*
Density, **7**: 88
Refractive index, **7**: 88
Dispersion, **7**: 107
- 2, 4-Dichlorophenol**, electrical conductivity, aqueous solution, **6**: 271
- 1, 2-Dichloropropane**
Surface tension, **4**: 449
Verdet constant, **6**: 428
- 1, 3-Dichloropropane**, viscosity, **7**: 214
- 2, 2-Dichloropropane**
Azeotropic mixture, **3**: 320
- 1, 1'-Dichloro propyl alcohol**
Diffusion in water, **5**: 70
- Di-(chloropropyl) sulfide
-Di-(2-chloroethyl) sulfide*
- 2, 6-Dichloroquinone**
Heat of combustion, **5**: 169
- Dichlorosilicane
Density, **3**: 23
Vapor pressure, **3**: 214

- Dichlorotetrammine cobaltic bromide
Solubility in aqueous solutions, **7**: 327
- Dichlorotetrammine cobaltic hexacyanoferrate
Solubility in aqueous solutions, **7**: 335
- Dichlorotetrammine cobaltic nitrate
Solubility in aqueous solutions, **7**: 327
- Dichlorotetrammine cobaltic picrate
Solubility in aqueous solutions, **7**: 331
- Dichlorotetrammine cobaltic thiocyanate
Solubility in aqueous solutions, **7**: 330
- Dicinnamylideneacetone
-*Isoamyl acetate*
Density, **3**: 190
Viscosity, **5**: 50
- Dicyanodiamide
Diffusion in water, **5**: 69
Heat of formation, **5**: 182
Refractive index, **7**: 29
Solubility in water, **4**: 251
Specific heat, **5**: 102
-*Cyanamide**
-*Ethyl alcohol*
Freezing point-solubility, **4**: 108
-*Ethyl ether*
Freezing point-solubility, **4**: 108
- Dicyanogen
Vapor pressure
Liquid, **3**: 214
Solid, **3**: 207
- Dicyclohexanolacetylene
Magnetic susceptibility, **6**: 363
- Dicyclohexyl
Cryoscopic constant, **4**: 184
Magnetic susceptibility, **6**: 363
- Didymolite
Density, **1**: 146
Refractive index, **1**: 146, 169
- Dielectric absorption, **6**: 97
- Dielectric constant, **6**: 73
Balata, **2**: 273
Castor oil in toluene, **2**: 211
Conversion factors, **1**: 21
Definition, **1**: 36
Electric field, effect of, **6**: 106
Electrostriction, **6**: 207
Gases, **6**: 74
Glass, **2**: 101
Gutta percha, **2**: 273
Illumination, effect of, **6**: 79
Magnetic field, effect of, **6**: 105
Nitrocellulose plastics, **2**: 298
Oils and fats, **2**: 211
Oils, insulating, **2**: 305
Phenol resins, **2**: 299
Porcelains, **2**: 72, 80
Pressure, effect of, **6**: 105
Rubber, raw, **2**: 272
Standard liquids, **6**: 82
Whiteware, **2**: 80
- Dielectric dispersion, **6**: 97
- Dielectric strength, **6**: 73
Conversion factors, **1**: 27
Glass, **2**: 101
Insulating oils, **2**: 305
Moisture, effect of, on, **2**: 306
Nitrocellulose plastics, **2**: 298
Phenol resins, **2**: 299
Porcelain, electrical, **2**: 71, 72
Porcelain, laboratory, **2**: 81
Temperature, effect of, on, **2**: 307
Transformer oils, **2**: 305, 306
Whiteware, **2**: 81
- Dielectrics, **6**: 73
Conductivity, effect of X-rays, **6**: 6
Contact potentials, **6**: 57
Liquids, industrial, **2**: 305
Solids, industrial, **2**: 310
- Dienett's German silver, **2**: 375
- Diesel bearings (alloy), **2**: 375
- Diesel motor oils, **2**: 159

- Diethanolacetylene
Magnetic susceptibility, **6**: 362
- Diethyl acetosuccinate
Verdet constant, **6**: 430
- Diethyl acetylenedicarboxylate
Verdet constant, **6**: 429
- Diethyl adipate, viscosity, **7**: 221
- Diethyl allylmalonate
Verdet constant, **6**: 430
- Diethyl benzalmalonate
Dielectric absorption, **6**: 96
Dielectric constant, **6**: 96
Refractive index, **7**: 60
- Diethyl benzylmalonate
Birefringence, electric, **7**: 112
- Diethyl bromomalonate
Surface tension, **4**: 457
- Diethyl *O*-butyrylmalate
Surface tension, **4**: 461
- Diethyl camphorate
Optical rotatory power, **7**: 447
Refractive index, **7**: 61
- Diethyl *O*-caproylmalate
Surface tension, **4**: 462
- Diethyl carbonate
Absorption spectra, **5**: 338
Azeotropic mixtures, **3**: 319
Birefringence, electric, **7**: 111
Dielectric strength, **6**: 88
Electrical conductivity, **6**: 144 145
Heat of vaporization, **5**: 137
Refractive index, **7**: 38
Specific heat, **5**: 109
Surface tension, **4**: 436, 452
- Diethyl caronate
Surface tension, **4**: 461
- Diethyl chlorofumarate
Surface tension, **4**: 458
- Diethyl chloromaleate
Surface tension, **4**: 458
- Diethyl citraconate
Refractive index, **7**: 48
Verdet constant, **6**: 430
Viscosity, **7**: 220
- Diethyl cyanomalonate
Electrical conductivity, aqueous solution, **6**: 287
Heat of solution in water, **5**: 150
Refractive index, **7**: 44
- Diethyl cyclobutane-1, 1-dicarboxylate
Surface tension, **4**: 460
- Diethyl cyclopropane-1, 1-dicarboxylate
Surface tension, **4**: 459
Viscosity, **7**: 220
- Diethyl cyclopropane-1, 2-dicarboxylate
Surface tension, **4**: 459
- Diethyl *O*-decoylmalate
Surface tension, **4**: 462
- Diethyl diacetyl-*d*-tartrate
Cryoscopic constant, **4**: 184
Viscosity, **5**: 36, 45, 48
-*Ethylene bromide*
Density, **3**: 155
Freezing point-solubility, **4**: 107
Viscosity, **5**: 36
- Naphthalene*
Density, **3**: 194
Freezing point-solubility, **4**: 156
Viscosity, **5**: 51
- Nitrobenzene*
Density, **3**: 178
Freezing point-solubility, **4**: 129
Viscosity, **5**: 45
- m-Nitrotoluene*
Density, **3**: 187
Freezing point-solubility, **4**: 150
Viscosity, **5**: 49
- Phenol*
Density, **3**: 184
Freezing point-solubility, **4**: 137
Viscosity, **5**: 48

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Diethyl diallylmalonate**
Refractive index, **7**: 60
Verdet constant, **6**: 431
- Diethyl diazomalonate**
Absorption spectra, ultra-violet, **5**: 379
- Diethyl diethylmalonate**
Absorption spectra, **5**: 348
Refractive index, **7**: 56
Saponification constant, **7**: 135
Verdet constant, **6**: 430
- Diethyl dimethylmalonate**
Refractive index, **7**: 48
Verdet constant, **6**: 430
Viscosity, **7**: 220
- Diethyl disulfide**, dielectric constant, **6**: 88
- Diethyl ethylbenzylmalonate**
Surface tension, **4**: 462
- Diethyl ethylmalonate**
Verdet constant, **6**: 430
- Diethyl fumarate**
Refractive index, **7**: 44
Surface tension, **4**: 458
Aqueous solution, **4**: 470
Verdet constant, **6**: 429
Viscosity, **7**: 219
-*Diethyl tartrate*
Density, **3**: 192
- Diethyl glutarate**
Absorption spectra, **5**: 333
Saponification constant, **7**: 135
Verdet constant, **6**: 430
Viscosity, **7**: 220
- Diethyl O-heptoylmalate**
Surface tension, **4**: 462
- Diethyl isophthalate**
Refractive index, **7**: 57
Verdet constant, **6**: 430
- Diethyl isopropylmalonate**
Verdet constant, **6**: 430
- Diethyl isosuccinate**
Verdet constant, **6**: 430
- Diethyl itaconate**
Refractive index, **7**: 48
Verdet constant, **6**: 430
- Diethyl ketone**
Absorption spectra, **5**: 332, 338
Azeotropic mixtures, **3**: 319–321, 323
Boiling point, **3**: 343
Compressibility, **3**: 36
Density, **3**: 29
Aqueous solution, **3**: 114
Dielectric constant, **6**: 88
Heat of combustion, **5**: 167
Heat of vaporization, **5**: 137
Polarization of light scattered by, **5**: 266
Refractive index, **7**: 37
Solubility in water, **3**: 388
Specific heat, **5**: 109
Surface tension, **4**: 452
Verdet constant, **6**: 428
Viscosity, **7**: 216
-*Benzoic acid**
-*Ethyl alcohol*
Density, aqueous solution, **3**: 127
Miscibility in water, **3**: 413
-*Naphthalene*
Boiling point elevation, **3**: 343
- Diethyl malate**
Density, **3**: 29
Dielectric constant, **6**: 94
Optical rotatory power, **7**: 370
Photochemical bromination, **7**: 170
Specific heat, **5**: 112
Surface tension, **4**: 458
Verdet constant, **6**: 426
Dispersion, **6**: 433
-*Acetone**
-*Benzene**
-*Chloroform**
-*Ethyl acetate*
Boiling point elevation, **3**: 340
- Diethyl malate**.—(Continued)
-*Methyl alcohol*
Boiling point elevation, **3**: 334
- Diethyl maleate**
Refractive index, **7**: 44
Surface tension, **4**: 458
Verdet constant, **6**: 429
Viscosity, **7**: 219
-*Diethyl tartrate*
Density, **3**: 192
- Diethyl malonate**
Absorption spectra, **5**: 333
Birefringence, electric, **7**: 111
Compressibility, **3**: 39
Density, **3**: 29
Dielectric constant, **6**: 92
Electrical conductivity, aqueous solution, **6**: 283
Magnetic susceptibility, **6**: 362
Refractive index, **7**: 42
Saponification constants, **7**: 135
Specific heat, **5**: 111
Surface tension, **4**: 457
Aqueous solution, **4**: 469
Verdet constant, **6**: 429
Viscosity, **7**: 219
-*Benzene**
-*Ethyl alcohol*
Boiling point elevation, **3**: 337
-*Sulfuryl chloride*
Freezing point-solubility, **4**: 189
-*Xylene*
Density, **3**: 189
- Diethyl mercury**
Absorption spectra, solutions, **5**: 328
Boiling point, **1**: 121, 163
Density, **1**: 121
Magnetic susceptibility, **6**: 357
Refractive index, **1**: 121, 165
- Diethyl mesaconate**
Refractive index, **7**: 48
Verdet constant, **6**: 430
Viscosity, **7**: 220
- Diethyl methylbromomalonate**
Surface tension, **4**: 458
- Diethyl 3-methyl- Δ^2 -cyclopropene-1, 2-dicarboxylate**
Surface tension, **4**: 460
- Diethyl methylethylmalonate**
Refractive index, **7**: 53
Viscosity, **7**: 221
- Diethyl methylsuccinate**
Verdet constant, **6**: 430
- Diethyl monobenzoyltartrate**
-*Acetic acid**
-*Benzene**
Diethyl monotoluyltartrate (*o*-, *m*-, *p*-)
-*Acetic acid**
Diethyl monoureidodihydroxysuccinate
Refractive index, **7**: 30
- Diethyl O-nonoylmalate**
Surface tension, **4**: 462
- Diethyl O-octoylmalate**
Surface tension, **4**: 462
- Diethyl oxalate**
Absorption spectra, **5**: 332, 340
Azeotropic mixtures, **3**: 322, 323
Compressibility, **3**: 39
Density, **3**: 29, 33
Aqueous solution, **3**: 114
Dielectric constant, **6**: 91
Electrical conductivity, **6**: 144
Heat of solution in water, **5**: 150
Heat of vaporization, **5**: 137
Magnetic susceptibility, **6**: 362
Refractive index, **7**: 39, 79
Saponification constant, **7**: 135
Specific heat, **5**: 110
Surface tension, **4**: 445
Verdet constant, **6**: 429
Viscosity, **7**: 217
- Diethyl oxalate**.—(Continued)
-*Benzene**
-*Methylene iodide*
Density, **3**: 148; **7**: 79
Refractive index, **7**: 79
Dispersion, **7**: 103
-*Trichloroacetic acid*
Freezing point-solubility, **4**: 102
-*Xylene*
Density, **3**: 185
- Diethyl oxaloacetate**
Dielectric absorption, **6**: 94
Dielectric constant, **6**: 94
- Diethyl oxalopropionate**
Dielectric absorption, **6**: 94
Dielectric constant, **6**: 94
- Diethyl phthalate**
Absorption spectra, **5**: 333, 348
Refractive index, **7**: 57
Surface tension, **4**: 437, 461
Verdet constant, **6**: 430
Viscosity, **7**: 221
-1, 4-Dichloronaphthalene*
-*Naphthalene*
Density, **7**: 89
Refractive index, **7**: 89
Dispersion, **7**: 108
-*Nitrocellulose*
Density, **3**: 196
- Diethyl pimelate**, viscosity, **7**: 221
- Diethyl O-propionylmalate**
Surface tension, **4**: 461
- Diethyl propylmalonate**
Verdet constant, **6**: 430
- Diethyl sebacate**
Magnetic susceptibility, **6**: 364
Surface tension, **4**: 462
Verdet constant, **6**: 431
Viscosity, **7**: 221
- Diethyl suberate**
Verdet constant, **6**: 430
Viscosity, **7**: 221
- Diethyl succinate**
Absorption spectra, **5**: 333
Electrical conductivity, **6**: 145
Magnetic susceptibility, **6**: 363
Refractive index, **7**: 45
Specific heat, **5**: 112
Surface tension, **4**: 458
Aqueous solution, **4**: 470
Verdet constant, **6**: 430
Viscosity, **5**: 40; **7**: 220
-*Benzene**
-*Diethyl tartrate*
Density, **3**: 192
-*Ethyl acetate*
Density, **3**: 166
Surface tension, **4**: 473
Viscosity, **5**: 40
-*Trichloroacetic acid*
Freezing point-solubility, **4**: 103
-*m-Xylene*
Density, **3**: 191
- Diethyl succinosuccinate**
Dielectric constant, **6**: 96
- Diethyl sulfate**
Absorption spectra, **5**: 332, 337
Density, **3**: 28
Diffusion in methyl alcohol, **5**: 72
Electrical conductivity, **6**: 143
Magnetic susceptibility, **6**: 361
Surface tension, **4**: 451
- Diethyl sulfide**
Absorption spectra, **5**: 332
Birefringence, electric, **7**: 111
Boiling point, **3**: 219, 342
Critical point data, **3**: 242, 248
Density, **3**: 28
Dielectric constant, **6**: 88
Heat of combustion, **5**: 169

Diethyl sulfide.—(Continued)

- Magnetic susceptibility, **6**: 361
 - Orthobaric density, **3**: 241
 - Polarization of light scattered by, **5**: 266
 - Refractive index, **7**: 36
 - Solubility in water, **3**: 388
 - Specific heat
 - Gas, **5**: 81
 - Liquid, **5**: 109
 - Surface tension, **4**: 451
 - Thermal conductivity, **5**: 228
 - Vapor pressure, **3**: 219
 - Aqueous solution, **3**: 364
 - Vapor pressure above 1 atm., **3**: 241
 - Viscosity, **7**: 216
 - Cadmium iodide*
 - Cuprous bromide*
 - Cuprous chloride*
 - Diphenylamine
 - Boiling point elevation, **3**: 342
 - Mercuric chloride
 - Boiling point elevation, **3**: 342
 - Mercuric iodide
 - Boiling point elevation, **3**: 342
 - Mercuric methyl chloride
 - Boiling point elevation, **3**: 342
 - Mercuric methyl iodide
 - Boiling point elevation, **3**: 342
 - Stannous bromide
 - Boiling point elevation, **3**: 342
 - Stannous chloride
 - Boiling point elevation, **3**: 342
- Diethyl sulfite**
- Absorption spectra, **5**: 337
 - Dielectric constant, **6**: 88
 - Electrical conductivity, **6**: 143
 - Magnetic susceptibility, **6**: 361
 - Surface tension, **4**: 451

Diethyl tartrate

- Density, **3**: 29
 - Aqueous solution, **3**: 112–114
- Dielectric constant, **6**: 94
- Magnetic susceptibility, **6**: 363
- Surface tension, **4**: 458
 - Aqueous solution, **4**: 470
- Verdet constant, **6**: 426
 - Dispersion, **6**: 433
- Acetone*
- Allyl alcohol*
- Ammonium chloride*
- Ammonium nitrate*
- Ammonium sulfate*
- Aniline*
- Anisole*
- Barium chloride*
- Benzaldehyde*
- Benzaldoxime*
- Benzene*
- Benzyl alcohol*
- Bromoform*
- Bromobenzene*
- α -Bromonaphthalene*
- Butyl alcohol*
- Carbon tetrachloride*
- Chlorobenzene*
- Chloroform*
- Cinnamaldehyde*
- Diethyl fumarate*
- Diethyl maleate*
- Diethyl succinate*
- Dimethylaniline
 - Density, **3**: 192
- 2, 4-Dinitrotoluene
 - Density, **3**: 186
- 2, 6-Dinitrotoluene
 - Density, **3**: 186
- Ethyl acetate
 - Boiling point elevation, **3**: 341
- Ethyl acetoacetate
 - Density, **3**: 185

Diethyl tartrate.—(Continued)

- Ethyl alcohol
 - Density, **3**: 160
- Ethyl bromide
 - Density, **3**: 157
- Ethyl dimethylacetoacetate
 - Density, **3**: 192
- Ethyl iodide
 - Density, **3**: 158
- Ethyl methylacetoacetate
 - Density, **3**: 189
- Ethylene bromide
 - Density, **3**: 155
- Distribution coefficients in water, **3**: 431
- Ethylene bromide-Nitrobenzene
 - Density, **3**: 197
- Ethylene chloride
 - Density, **3**: 155
- Ethylidene chloride
 - Density, **3**: 155
- Formamide
 - Density, **3**: 150
- Glycerol
 - Density, **3**: 165
- Iodobenzene
 - Density, **3**: 176
- Isobutyl alcohol
 - Density, **3**: 167; **7**: 83
 - Refractive index, **7**: 83
- Mesitylene
 - Density, **3**: 192
- Methyl acetoacetate
 - Density, **3**: 172
- Methyl alcohol
 - Boiling point elevation, **3**: 334
 - Density, **3**: 151
- Methyl iodide
 - Density, **3**: 149
- Methylaniline
 - Density, **3**: 189
- Methylene chloride
 - Density, **3**: 148
- Methylene iodide
 - Density, **3**: 148
- Methylhexylcarbinol
 - Density, **3**: 192
- Naphthalene
 - Density, **3**: 192
- Nitroanisole (*o*-, *p*-)
 - Density, **3**: 187
- Nitrobenzene
 - Density, **3**: 177
- α -Nitronaphthalene
 - Density, **3**: 192
- o*-Nitrophenetole
 - Density, **3**: 191
- o*-Nitrophenol
 - Density, **3**: 178
- Nitrotoluene (*o*-, *m*-, *p*-)
 - Density, **3**: 187
- Paraldehyde
 - Density, **3**: 186
- Phenetole
 - Density, **3**: 191
- Phenol
 - Density, **3**: 183
- Potassium chlorate
 - Density, aqueous solution, **3**: 103
- Potassium chloride
 - Density, aqueous solution, **3**: 103
- Potassium iodide
 - Density, aqueous solution, **3**: 103
- Potassium nitrate
 - Density, aqueous solution, **3**: 103
- Potassium thiocyanate
 - Density, aqueous solution, **3**: 103
- Propyl alcohol
 - Density, **3**: 164
- Pyridine
 - Density, **3**: 172

Diethyl tartrate.—(Continued)

- Quinoline
 - Density, **3**: 192
 - Salicylaldehyde
 - Density, **3**: 186
 - Sodium acetate
 - Density, aqueous solution, **3**: 102
 - Sodium chlorate
 - Density, aqueous solution, **3**: 102
 - Sodium chloride
 - Density, aqueous solution, **3**: 102
 - Sodium iodide
 - Density, aqueous solution, **3**: 102
 - Sodium nitrate
 - Density, aqueous solution, **3**: 102
 - Tetrachloroethane
 - Density, **3**: 154
 - Toluene
 - Density, **3**: 188
 - Toluidine (*o*-, *m*-, *p*-)
 - Density, **3**: 189
 - Xylene (*o*-, *m*-, *p*-)
 - Density, **3**: 191
- Diethyl terephthalate**
- Verdet constant, **6**: 430
- Diethyl *o*-valerylmalate**
- Surface tension, **4**: 461
- Diethylacetal**
- Verdet constant, **6**: 429
- Diethylacetic acid**
- Heat of combustion, **5**: 165
 - Viscosity, **7**: 218
- Diethylacetic anhydride**
- Heat of combustion, **5**: 166
- Diethylacetone, viscosity, **7**: 219**
- Diethylamine**
- Absorption spectra, **5**: 332, 337
 - Azeotropic mixtures, **3**: 320
 - Birefringence, electric, **7**: 111
 - Critical point data, **3**: 242, 248
 - Density, aqueous solution, **3**: 114
 - Dielectric constant, **6**: 82, 88
 - Diffusion of vapor in air, **5**: 62
 - Electrical conductivity, **6**: 143
 - Aqueous solution, **6**: 268
 - Heat of combustion, **5**: 167
 - Heat of solution in water, **5**: 149
 - Heat of vaporization, **5**: 137
 - Magnetic susceptibility, **6**: 361
 - Orthobaric density, **3**: 242
 - Refractive index, **7**: 36
 - Solubility in water, **3**: 261, 388
 - Specific heat, **5**: 109
 - Surface tension, **4**: 451
 - Thermal conductivity, **5**: 214
 - Vapor pressure, **3**: 219
 - Vapor pressure above 1 atm., **3**: 242
 - Viscosity
 - Gas, **5**: 4
 - Liquid, **5**: 41; **7**: 216
 - Allyl isothiocyanate*
 - Amyl alcohol*
 - Benzene*
 - Bromobenzene*
 - Butyl alcohol*
 - Butyl bromide*
 - Butyl ether*
 - Carbon tetrachloride*
 - Chloroform*
 - o*-Dichlorobenzene*
 - Ethyl ether
 - Distribution coefficients in water, **3**: 427
 - Ethylene chloride
 - Distribution coefficients in water, **3**: 426
 - Isoamyl phenyl ether
 - Distribution coefficients in water, **3**: 427

* Data for system will be found under this compound in Index. Full explanation on page vii.

Diethylamine.—(Continued)

-Isobutyl alcohol

Distribution coefficients in water, **3**: 427

-sec-Octyl alcohol

Distribution coefficients in water, **3**: 427

-Phenyl isothiocyanate

Refractive index, **7**: 83

-Phenyl thiocyanate

Density, **3**: 169

-Toluene

Distribution coefficients in water, **3**: 427

-1, 3, 4-Trichlorobenzene

Distribution coefficients in water, **3**: 427

-Xylene

Distribution coefficients in water, **3**: 427**Diethylaminonaphthalene** (α -, β -)Refractive index, **7**: 60

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107**1, 4-Diethylaminonaphthalene**Refractive index, **7**: 61

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107**2, 3-Diethylaminonaphthalene**

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107**Diethylammonium bromide**

-Dichloromethane*

Diethylammonium chlorideBoiling point elevation in aqueous solution, **3**: 327Density, aqueous solution, **3**: 62, 112, 114Electrical conductivity, aqueous solution, **6**: 232Heat of solution in water, **5**: 149Viscosity of aqueous solution, **5**: 13

-Acetonitrile*

-tert.-Amyl alcohol*

-Chloroform*

-Chloroform*-Tetrapropylammonium iodide

-Dichloromethane*

-Ethyl alcohol

Boiling point elevation, **3**: 336

-Isoamyl alcohol

Boiling point elevation, **3**: 343

-Pyridine

Boiling point elevation, **3**: 342

-Sulfur dioxide

Boiling point elevation, **3**: 328**Diethylammonium nitrate**Surface tension, **4**: 451

-Chloroform*

-Dichloromethane*

DiethylanilineAbsorption spectra, **5**: 333, 346Birefringence, electric, **7**: 111Boiling point, **3**: 226Compressibility, **3**: 37Density, **3**: 30Heat of combustion, **5**: 168Refractive index, **7**: 52Specific heat, **5**: 112Surface tension, **4**: 460Vapor pressure, **3**: 226Verdet constant, **6**: 430Viscosity, **5**: 43, 45; **7**: 221, 223

-1, 4-Dichloronaphthalene*

Diethylaniline.—(Continued)

-Isoamyl alcohol

Density, **3**: 173Viscosity, **5**: 43

-Naphthalene

Density, **7**: 89Refractive index, **7**: 89Dispersion, **7**: 108

-Nitrobenzene

Density, **3**: 177Heat of solution, **5**: 157Specific heat, **5**: 128Surface tension, **4**: 473Viscosity, **5**: 45**Diethylaniline hydrochloride**

-Chloroform*

Diethylaniline hydroiodide

-Chloroform*

Diethylcetylammmonium chlorideElectrical conductivity, aqueous solution, **6**: 232**Diethylcyclobutane-1, 1-dicarboxylate**Viscosity, **7**: 221**Diethylcyclohexylamine**Magnetic susceptibility, **6**: 363**Diethyldimethyllead**Boiling point, **1**: 116, 163Density, **1**: 116Refractive index, **1**: 116, 165**Diethyldimethylsilicon**Boiling point, **1**: 113, 163Density, **1**: 113Refractive index, **1**: 113, 168**Diethyldiisobutyllead**Boiling point, **1**: 116, 163Density, **1**: 116Refractive index, **1**: 116, 165**Diethyldipropyllead**Boiling point, **1**: 116, 163Density, **1**: 116Refractive index, **1**: 116, 165**Diethylene disulfide**

-Xylene

Density, **7**: 83Refractive index, **7**: 83**Diethylene glycol**Heat of combustion, **5**: 164**Diethylisopropyl alcohol**

-Benzene*

-Ethyl amyl ether

Density, **3**: 190**Diethylketene**Absorption spectra, **5**: 340, 376Refractive index, **7**: 39**Diethylmalonic acid**Decomposition, kinetics of, **7**: 122Heat of combustion, **5**: 165**Diethylnitrosoamine**Refractive index, **7**: 36Surface tension, **4**: 451**Diethylphenylammonium 3, 5-dinitrobenzoate**, electrical conductivity, aqueous solution, **6**: 243 β , β -DiethylstyreneHeat of combustion, **5**: 164Refractive index, **7**: 57**Diethylsuccinic acid**Electrical conductivity, aqueous solution, **6**: 288Heat of combustion, **5**: 165**Diethylsuccinic anhydride**Heat of combustion, **5**: 166**Diethylsulfone**

-Chloroform*

Diethylthallium hydroxideElectrical conductivity, aqueous solution, **6**: 268**Diethyltin iodide**

-Ethyl ether

Boiling point elevation, **3**: 341**Dietzeite**Density, **1**: 145Refractive index, **1**: 145, 173**Diffusion**Beta rays, **1**: 370Coefficient of, **5**: 62, 63Conversion factors, **1**: 25Gases and vapors, **5**: 62Liquids, **5**: 63Metals in metals, **5**: 75Odors, **1**: 358Oxides in tungsten, **6**: 55-56Radioactive elements, **1**: 364Solids, **5**: 76Velocity of, **5**: 62, 76, 77**Diffusivity**Conversion factors, **1**: 25Definition, **1**: 36**Difluoroacetamide**Magnetic susceptibility, **6**: 361**Difluoroacetic acid**, electrical conductivityaqueous solution, **6**: 262**Difluorodibromoethane**Magnetic susceptibility, **6**: 361**Difluoroethanol**Magnetic susceptibility, **6**: 361**Difluoroethylene**Solubility in non-aqueous liquids, **3**: 269**Digallic acid**Specific heat, aqueous solution, **5**: 125**Diglycollic acid**Density, aqueous solution, **3**: 114**Dihydrite**Density, **1**: 122Refractive index, **1**: 122, 173**9, 10-Dihydroanthracene**Absorption spectra, **5**: 350

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107**Dihydrobenzene**Heat of combustion, **5**: 163Refractive index, **7**: 38 α -Dihydrocampholenic acidSurface tension, **4**: 460**Dihydrocarvone**Dielectric constant, **6**: 95Optical rotatory power, **7**: 413Refractive index, **7**: 52**Dihydrolimonene**Birefringence, magnetic, **7**: 111**Dihydronaphthalene**Absorption spectra, **5**: 346Heat of combustion, **5**: 163Magnetic susceptibility, **6**: 363Refractive index, **7**: 49Specific heat, **5**: 112

-Naphthalene

Freezing point-solubility, **4**: 155**1, 4-Dihydronaphthalene**Heat of fusion, **5**: 134**Dihydronaphthoic acid**Electrical conductivity, aqueous solution, **6**: 297Optical rotatory power, **7**: 406**Dihydrophenanthrene**Heat of fusion, **5**: 134

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107**Dihydrophthalic acids**, electrical conductivity, aqueous solution, **6**: 286**Dihydropinene**Birefringence, magnetic, **7**: 111**Dihydroterephthalic acids**Heat of combustion, **5**: 165**Dihydroxybehenic acid**Heat of combustion, **5**: 166

* Data for system will be found under this compound in Index. Full explanation on page vii.

Dihydroxybenzaldehydes, electrical conductivity, aqueous solution, **6**: 279
o-Dihydroxybenzene. See Pyrocatechol.
m-Dihydroxybenzene. See Resorcinol.
p-Dihydroxybenzene. See Hydroquinol.
2, 4-Dihydroxybenzoic acid
 Electrical conductivity, aqueous solution, **6**: 280
 Heat of combustion, **5**: 165
3, 4-Dihydroxybenzoic acid
 Boiling point elevation in aqueous solution, **3**: 327
 Electrical conductivity, aqueous solution, **6**: 280
 Heat of solution in water, **5**: 150
Dihydroxymethylcyclopropane
 Heat of combustion, **5**: 164
1, 4-Dihydroxynaphthalene
 -Benzamide*
 -Naphthylamine (α -, β -)
 Freezing point-solubility, **4**: 157
 -Phenylenediamine (*m*-, *p*-)
 Freezing point-solubility, **4**: 143
 -Succinimide
 Freezing point-solubility, **4**: 114
1, 5-Dihydroxynaphthalene
 -Benzamide*
 -Naphthylamine (α -, β -)
 Freezing point-solubility, **4**: 157
1, 6-Dihydroxynaphthalene
 -Benzamide*
 -Naphthylamine (α -, β -)
 Freezing point-solubility, **4**: 157
 -Phenylenediamine (*o*-, *m*-, *p*-)
 Freezing point-solubility, **4**: 143
 -Succinimide
 Freezing point-solubility, **4**: 114
1, 8-Dihydroxynaphthalene
 -Benzamide*
 -Naphthylamine (α -, β -)
 Freezing point-solubility, **4**: 157
 -Phenylenediamine (*o*-, *m*-, *p*-)
 Freezing point-solubility, **4**: 143
2, 3-Dihydroxynaphthalene
 -Benzamide*
 -Naphthylamine (α -, β -)
 Freezing point-solubility, **4**: 157
 -Phenylenediamine (*o*-, *m*-, *p*-)
 Freezing point-solubility, **4**: 143
 -Succinimide
 Freezing point-solubility, **4**: 114
2, 6-Dihydroxynaphthalene
 -Benzamide*
 -Naphthylamine (α -, β -)
 Freezing point-solubility, **4**: 157
 -Phenylenediamine (*o*-, *m*-, *p*-)
 Freezing point-solubility, **4**: 143
 -Succinimide
 Freezing point-solubility, **4**: 114
2, 7-Dihydroxynaphthalene
 -Benzamide*
 -Naphthylamine (α -, β -)
 Freezing point-solubility, **4**: 158
 -Phenylenediamine (*o*-, *m*-, *p*-)
 Freezing point-solubility, **4**: 143, 144
1, 5-Dihydroxynaphthalene diamyl ether
 -Quinoline
 Density, **7**: 88
 Refractive index, **7**: 88
 Dispersion, **7**: 108
1, 3-Dihydroxy-2, 4, 6-tribromobenzene
 Heat of solution in water, **5**: 149
Dihydroxyxanthone
 Photoluminescence, **5**: 387
2, 4-Diiodoaniline
 -Isoamyl acetate
 Density, **3**: 176
 Viscosity, **5**: 45
o-Diiodobenzene
 Absorption spectra, **5**: 338
 Heat of fusion, **5**: 133

o-Diiodobenzene.—(Continued)

Specific heat
 Liquid, **5**: 109
 Solid, **5**: 103
m-Diiodobenzene
 Absorption spectra, **5**: 338
 Heat of fusion, **5**: 133
 Specific heat
 Liquid, **5**: 109
 Solid, **5**: 103
p-Diiodobenzene
 Heat of fusion, **5**: 133
 Specific heat
 Liquid, **5**: 109
 Solid, **5**: 103
 -*p*-Bromiodobenzene*
 -*p*-Chloriodobenzene*
 -*p*-Dibromobenzene*
 -*p*-Dichlorobenzene*
Diiodoethylene
 Absorption spectra, ultra-violet, **5**: 368
 Dielectric constant, **6**: 84
2, 3-Diiodopentane
 Diffusion in methyl alcohol, **5**: 72
Diisoamyl
 Birefringence, electric, **7**: 111
 Heat of combustion, **5**: 164
 Refractive index, **7**: 53
 Specific heat, **5**: 113
 Surface tension, **4**: 437, 460
 -Acetone*
 -Aniline*
 -Hexane
 Viscosity, **5**: 49
 -Methyl alcohol
 Solubility, mutual, **3**: 397
 -Methylene iodide
 Solubility, mutual, **3**: 397
 -Nitrobenzene
 Solubility, mutual, **3**: 397
 -Propionitrile
 Solubility, mutual, **3**: 397
 -Sulfur dioxide
 Solubility, mutual, **3**: 394
 -*m*-Toluidine
 Solubility, mutual, **3**: 397
Diisoamyl oxalate, specific heat, **5**: 113
Diisoamyl sebacate
 Surface tension, **4**: 462
 Viscosity, **7**: 222
Diisoamylamine
 Absorption spectra, **5**: 333
 Electrical conductivity, aqueous solution, **6**: 297
 Heat of combustion, **5**: 168
 Magnetic susceptibility, **6**: 363
 Refractive index, **7**: 53
 Surface tension, **4**: 437, 460
Diisoamylammonium chloride
 -Chloroform*
Diisoamylaniline, viscosity, **7**: 222
Diisoamyl dimethyllead
 Boiling point, **1**: 116, 163
 Density, **1**: 116
 Refractive index, **1**: 116, 165
Diisoamylene, dielectric constant, **6**: 95
Diisobutyl
 Critical point data, **3**: 245, 249
 Orthobaric density, **3**: 245
 Vapor pressure above 1 atm., **3**: 245
Diisobutyl carbonate
 Azeotropic mixtures, **3**: 320, 323
Diisobutyl succinate
 Verdet constant, **6**: 430
Diisobutylamine
 Dielectric constant, **6**: 94
 Electrical conductivity, aqueous solution, **6**: 289
 Heat of combustion, **5**: 168
 Heat of solution in water, **5**: 150
 Heat of vaporization, **5**: 137

Diisobutylamine.—(Continued)

Magnetic susceptibility, **6**: 363
 Refractive index, **7**: 45
 Specific heat, **5**: 112
 Surface tension, **4**: 437, 459
 Viscosity, **7**: 220
Diisobutylammonium dichloroacetate
 -Benzene*
 -Cyclohexane*
Diisobutylaniline, surface tension, **4**: 462
Diisobutyl dimethyllead
 Boiling point, **1**: 116, 163
 Density, **1**: 116
 Refractive index, **1**: 116, 165
Diisobutylene, heat of combustion, **5**: 163
Diisobutyraldehyde
 Magnetic susceptibility, **6**: 363
Diisopropenyl
 Refractive index, **7**: 39
 Viscosity, **7**: 217
Diisopropyl
 Boiling point, **3**: 222
 Critical point data, **3**: 244, 249
 Density, **3**: 29, 33
 Heat of combustion, **5**: 163
 Orthobaric density, **3**: 244
 Vapor pressure, **3**: 222
 Vapor pressure above 1 atm., **3**: 244
 Verdet constant, **6**: 429
 Viscosity, **7**: 218
Diisopropyl ketone
 Verdet constant, **6**: 429
 α , γ -Diketohydrindene
 Refractive index, **7**: 30
Diketopiperazine
 Heat of combustion, **5**: 167,
Dilead potassium bromide
 -Potassium bromide
 Solubility in water, **7**: 346
Dilithium amine
 Phototropy, **7**: 167
Dilution, heat of, **5**: 160
Dilver (alloy), **2**: 375
Dimensional equations, types of, **1**: 19
Dimensional formulas, **1**: 18
Di-*l*-menthyl tartrate
 -Benzene*
 -Nitrobenzene
 Density, **3**: 178
3, 5-Dimethoxyacetophenetide
 Solubility in water, **3**: 392
o-Dimethoxybenzene
 Cryoscopic constant, **4**: 183
 Surface tension, **4**: 458
 -Acetone*
 -Ethyl alcohol
 Viscosity, **5**: 38
 -Ethyl ether
 Viscosity, **5**: 41
m-Dimethoxybenzene
 Surface tension, **4**: 458
p-Dimethoxybenzene
 Surface tension, **4**: 458
o, *o*-Dimethoxybenzil
 Surface tension, **4**: 462
p-Dimethoxystilbene
 -Azobenzene*
 -Stilbene
 Freezing point-solubility, **4**: 163
Dimethyl acetylmaleate
 -Acetone*
 -Benzene*
 -Carbon disulfide*
 -Chloroform*
 -Ethyl acetate
 Boiling point elevation, **3**: 340
 -Methyl alcohol
 Boiling point elevation, **3**: 334
 Density, **3**: 151
Dimethyl azelate
 Saponification constant, **7**: 135

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Dimethyl camphorate**
Optical rotatory power, 7: 447
Refractive index, 7: 58
- Dimethyl carbonate**
Azeotropic mixtures, 3: 320
Heat of vaporization, 5: 137
Specific heat, 5: 108
X-rays, absorption coefficient, 6: 14, 16
- Dimethyl chlorofumarate**
Surface tension, 4: 454
- Dimethyl chloromaleate**
Surface tension, 4: 454
- Dimethyl citraconate**
Refractive index, 7: 41
Surface tension, 4: 457
Verdet constant, 6: 429
- Dimethyl diacetylracemate**
-Dimethyl diacetyltartrate
Viscosity, 5: 51
- Dimethyl d-diacetyltartrate**
-Dimethyl l-diacetyltartrate
Freezing point-solubility, 4: 158
- Dimethyl dimethoxysuccinate**
Density, 3: 29
-Ethyl bromide
Density, 3: 157
-Nitrobenzene
Density, 3: 177
- Dimethyl fumarate**
Heat of fusion, 5: 133
Saponification constant, 7: 135
Surface tension, 4: 454
- Dimethyl glutarate**
Absorption spectra, 5: 333
Saponification constant, 7: 135
- Dimethyl malate**
Electrical conductivity, 6: 144
Verdet constant, 6: 426
Dispersion, 6: 433
-Acetone*
-Benzene*
-Chloroform*
-Ethyl acetate
Boiling point elevation, 3: 340
-Methyl alcohol
Boiling point elevation, 3: 333
- Dimethyl maleate**
Refractive index, 7: 39
Saponification constant, 7: 135
Surface tension, 4: 454
- Dimethyl malonate**
Absorption spectra, 5: 332, 338
Azeotropic mixtures, 3: 321
Dielectric constant, 6: 88
Electrical conductivity, 6: 144
Aqueous solution, 6: 270
Magnetic susceptibility, 6: 362
Refractive index, 7: 37
Saponification constants, 7: 135
Surface tension, 4: 452
Verdet constant, 6: 428
-Tetraethylammonium iodide
Density, 3: 172
-Tetrapropylammonium iodide
Density, 3: 172
-Trichloroacetic acid
Freezing point-solubility, 4: 101
- Dimethyl mercury**
Absorption spectra, solutions, 5: 328
Boiling point, 1: 121, 163
Density, 1: 121
Magnetic susceptibility, 6: 357
Refractive index, 1: 121, 165
- Dimethyl mesaconate**
Refractive index, 7: 41
Surface tension, 4: 457
Verdet constant, 6: 429
- Dimethyl 3-methyl- Δ^2 -cyclopropene-1, 2-dicarboxylate**, surface tension, 4: 458
- Dimethyl oxalate**
Absorption spectra, 5: 337
Azeotropic mixtures, 3: 319-321
Critical point data, 3: 240, 248
Cryoscopic constant, 4: 183
Density, 3: 45
Aqueous solution, 3: 114
Dielectric constant, 6: 86
Heat of fusion, 5: 132
Heat of solution in water, 5: 149
Magnetic susceptibility, 6: 361
Melting point under pressure, 4: 15
Refractive index, 7: 29
Saponification constants, 7: 135
Solubility in water, 4: 251
Specific heat, 5: 102
Surface tension, aqueous solution, 4: 468
Vapor pressure above 1 atm., 3: 240
Volume change on melting, 4: 15
-Acetic acid*
-Chloroacetic acid*
-Catechol*
-2, 4-Dinitrophenol
Freezing point-solubility, 4: 114
-Hydroquinol
Freezing point-solubility, 4: 114
-Naphthol (α -, β -)
Freezing point-solubility, 4: 115
-Nitrophenol (*o*-, *m*-, *p*-)
Freezing point-solubility, 4: 114
-Phenol
Freezing point-solubility, 4: 114
-Picric acid
Freezing point-solubility, 4: 114
-Pyrogallol
Freezing point-solubility, 4: 114
-Resorcinol
Freezing point-solubility, 4: 114
-*p*-Toluidine
Freezing point-solubility, 4: 114
-Trichloroacetic acid
Freezing point-solubility, 4: 101
- Dimethyl sebacate**
Saponification constant, 7: 135
- Dimethyl suberate**
Saponification constant, 7: 135
- Dimethyl succinate**
Absorption spectra, 5: 332
Cryoscopic constant, 4: 183
Dielectric constant, 6: 91
Heat of fusion, 5: 133
Refractive index, 7: 39
Saponification constant, 7: 135
Solubility in water, 4: 251, 252
Surface tension, 4: 455
Verdet constant, 6: 429
-Acetic acid*
-Chloroacetic acid*
-Trichloroacetic acid
Freezing point-solubility, 4: 102
- Dimethyl sulfate**
Dielectric constant, 6: 85
Electrical conductivity, 6: 143
Magnetic susceptibility, 6: 361
Surface tension, 4: 449
Viscosity, 5: 27; 7: 214
-Sulfuric acid
Density, 3: 136
Viscosity, 5: 27
-Turpentine oil
Solubility, mutual, 3: 395
- Dimethyl sulfone**
Density, aqueous solution, 3: 113
- Dimethyl tartrate**
Density, 3: 29
Aqueous solution, 3: 114
Heat of fusion, 5: 133
Saponification constant, 7: 135
Surface tension, 4: 455
Vapor pressure, 3: 221
Viscosity, 5: 49
- Dimethyl tartrate.**—(Continued)
-Acetone*
-Acetonitrile*
-Benzene*
-Chloroform*
-Ethyl acetate
Boiling point elevation, 3: 340
-Methyl alcohol
Boiling point elevation, 3: 333
-Methyl thiocyanate
Boiling point elevation, 3: 335
-Nitrobenzene
Density, 3: 177
-Sulfuryl chloride
Freezing point-solubility, 4: 189
- Dimethyl terephthalate**
Absorption spectra, 5: 346
-Nitrobenzene
Boiling point elevation, 3: 343
-Trichloroacetic acid
Freezing point-solubility, 4: 104
- Dimethylacetal**
Surface tension, 4: 451
Verdet constant, 6: 428
- Dimethylacetylacetone**
Refractive index, 7: 41
Verdet constant, 6: 429
- β , β -**Dimethylacrylic acid**
Surface tension, 4: 452
- Dimethyladipic acid**
Electrical conductivity, aqueous solution, 6: 288
Heat of combustion, 5: 165
- Dimethylamine**
Absorption spectra, 5: 335
Critical point data, 3: 239, 248
Density
Aqueous solution, 3: 113
Gas, 3: 3
Dielectric constant, 6: 82
Electrical conductivity, aqueous solution, 6: 263
Heat of combustion, 5: 167
Heat of formation, 5: 182
Solubility in water, 3: 261
Surface tension, 4: 441, 449
Thermal conductivity, 5: 214
Vapor pressure, 3: 217
Vapor pressure above 1 atm., 3: 239
Viscosity
Aqueous solution, 5: 20
Liquid, 7: 214
-Chloroform*
-Dimethylammonium chloride
Density, 3: 162
Viscosity, 5: 39
-Ethyl ether
Distribution coefficients in water, 3: 425
-Phenyl thiocyanate
Viscosity, 5: 41
-Silver iodide
Density, 3: 139
Viscosity, 5: 28
-Toluene
Distribution coefficients in water, 3: 425
-Xylene
Distribution coefficients in water, 3: 425
- Dimethylamine chloroplatinate**
-Ethyl alcohol
Freezing point-solubility in water, 4: 406
- Dimethylaminobenzoic acids**
Electrical conductivity, aqueous solution, 6: 291
- Dimethylammonium chloride**
Density, aqueous solution, 3: 62
Electrical conductivity, aqueous solution, 6: 243

Dimethylammonium chloride.—(Continued)

- Vapor pressure lowering in aqueous solution, **3**: 293
 Viscosity, aqueous solution, **5**: 13
 -Chloroform*
 -Dimethylamine*
 -Sulfur dioxide
 Boiling point elevation, **3**: 328
Dimethylammonium hydroxide
 Viscosity, aqueous solution, **5**: 13
Dimethylammonium nitrate
 Electrical conductivity, **6**: 147
 Surface tension, **4**: 449
Dimethylaniline
 Absorption spectra, **5**: 333, 344
 Azeotropic mixtures, **3**: 322
 Birefringence, electric, **7**: 111
 Boiling point, **3**: 224
 Compressibility, **3**: 37
 Critical point data, **3**: 249
 Cryoscopic constant, **4**: 183
 Density, **3**: 29, 34
 Dielectric constant, **6**: 93
 Flash point, **2**: 162
 Heat of combustion, **5**: 168
 Heat of vaporization, **5**: 137
 Magnetic susceptibility, **6**: 363
 Refractive index, **7**: 43
 Specific heat, **5**: 112
 Surface tension, **4**: 458
 Vapor pressure, **3**: 224
 Verdet constant, **6**: 429
 Viscosity, **5**: 44, 45, 47, 49, 51; **7**: 219
 -Acetic acid*
 -Acetone*
 -Aniline*
 -Benzene*
 -Benzene*-*m*-Cresol
 -Benzhydrol*
 -Camphor*
 -Chloroform*
 -*o*-Chlorophenol*
 -*m*-Cresol*
 -Diethyl tartrate*
 -Ethyl acetate
 Density, **3**: 166
 Surface tension, **4**: 473
 -Ethyl alcohol
 Boiling point elevation, **3**: 337
 -Glycerol
 Mutual solubility, **3**: 396
 -*p*-Hydroxybenzaldehyde
 Freezing point-solubility, **4**: 148
 -Methyl acetate
 Vapor pressure, **3**: 289
 -Methyl alcohol
 Vapor pressure, **3**: 287
 -Nitrobenzene
 Density, **3**: 177
 Heat of solution, **5**: 157
 Specific heat, **5**: 128
 Surface tension, **4**: 473
 Viscosity, **5**: 45
 -Phenol
 Density, **3**: 183
 Freezing point-solubility, **4**: 136
 Viscosity, **5**: 47
 -Tetramethyldiaminobenzophenone
 Freezing point-solubility, **4**: 180
 -Toluene
 Density, **3**: 187
 Surface tension, **4**: 474
 -*m*-Xylene
 Density, **3**: 191
 Heat of solution, **5**: 157
 Specific heat, **5**: 128
 Surface tension, **4**: 474
 Viscosity, **5**: 51
Dimethylaniline hydrobromide
 Electrical conductivity, **6**: 147
 -Chloroform*

Dimethylaniline hydrochloride

- Verdet constant, **6**: 429
3, 4-Dimethylaniline
 -Xylene
 Distribution coefficients in water, **3**: 431
Dimethylbenzoic acids
 Electrical conductivity, aqueous solution, **6**: 291
sym.-**Dimethylbromoethylene**
 Dielectric constant, **6**: 86
2, 5-Dimethyl-2, 5-dibromo-3-hexine
 Magnetic susceptibility, **6**: 363
Dimethylbutadiene
 Absorption spectra, ultra-violet, **5**: 364
2, 2-Dimethylbutane
 Viscosity, **7**: 218
2, 2-Dimethyl-3-butanol
 Verdet constant, **6**: 429
1, 4-Dimethylcyclohexa-1, 3-diene
 Heat of combustion, **5**: 163
Dimethylcyclohexane
 Absorption spectra, **5**: 333
 Heat of vaporization, **5**: 137
 -Aniline*
1, 1-Dimethylcyclohexane
 Heat of combustion, **5**: 163
o-**Dimethylcyclohexane**
 Refractive index, **7**: 45
 Viscosity, **7**: 220
m-**Dimethylcyclohexane**
 Birefringence, electric, **7**: 111
 Heat of combustion, **5**: 163
 Refractive index, **7**: 45
 Viscosity, **7**: 220
 -Dimethyldecahydronaphthalenes
 Vapor pressure, **3**: 290
 -Methyldecahydronaphthalenes
 Vapor pressure, **3**: 290
p-**Dimethylcyclohexane**
 Heat of combustion, **5**: 163
 Refractive index, **7**: 45
 Viscosity, **7**: 220
Dimethylcyclohexanols
 Heat of combustion, **5**: 164
 Refractive index, **7**: 45
Dimethylcyclohexanone
 Magnetic susceptibility, **6**: 363
 Refractive index, **7**: 44
1, 3-Dimethyl-3-cyclohexene
 Heat of combustion, **5**: 163
 Refractive index, **7**: 44
1, 3-Dimethylcyclopentane
 Absorption spectra, **5**: 333
 Heat of combustion, **5**: 163
 Heat of vaporization, **5**: 137
 -Aniline*
Dimethylcyclopentanols
 Heat of combustion, **5**: 164
Dimethyldecahydronaphthalenes
 -Cyclohexane*
 -1, 3-Dimethylcyclohexane*
 -Methylcyclohexane
 Vapor pressure, **3**: 290
 -Methylcyclohexene
 Vapor pressure, **3**: 290
3, 3-Dimethyldicyclohexyl
 Heat of combustion, **5**: 164
Dimethyldiethylketotetrahydrofurfurane
 Magnetic susceptibility, **6**: 363
1, 3-Dimethyldihydrobenzene
 Heat of combustion, **5**: 163
Dimethyldihydroxyadipic acid
 Heat of combustion, **5**: 165
Dimethyldipropyllead
 Boiling point, **1**: 116, 163
 Density, **1**: 116
 Refractive index, **1**: 116, 165
Dimethylethylcarbinol
 Density, aqueous solution, **3**: 114
 Dielectric constant, **6**: 89

Dimethylethylcarbinol.—(Continued)

- Heat of combustion, **5**: 164
 Melting point under pressure, **4**: 10
 Thermal conductivity, **5**: 228
 -Chloral*
 β , β -**Dimethylglutaric acid**
 Electrical conductivity, aqueous solution, **6**: 283
 Optical rotatory power, **7**: 404
2, 2'-Dimethylheptane
 Dielectric constant, **6**: 94
2, 4-Dimethylheptane
 Compressibility, **3**: 37
 Dielectric constant, **6**: 94
2, 5-Dimethylheptane
 Compressibility, **3**: 37
 Dielectric constant, **6**: 94
2, 4-Dimethyl-2, 4-hexadiene
 Magnetic susceptibility, **6**: 363
2, 5-Dimethylhexane
 Boiling point, **3**: 225
 Compressibility, **3**: 37
 Heat of combustion, **5**: 163
 Surface tension, **4**: 458
 Vapor pressure, **3**: 225
3, 4-Dimethylhexane
 Compressibility, **3**: 37
 Heat of combustion, **5**: 163
2, 5-Dimethyl-3-hexin-2, 5-diol
 Magnetic susceptibility, **6**: 363
Dimethylhomopyrocatechol
 Verdet constant, **6**: 430
asym.-**Dimethylhydrazine**
 Refractive index, **7**: 34
1, 5-Dimethyl-3-isopropene-1-cyclohexene
 Heat of combustion, **5**: 164
Dimethylketotetrahydrofurfurane
 Magnetic susceptibility, **6**: 362
Dimethylmalonic acid
 Decomposition, kinetics of, **7**: 122
 Electrical conductivity, aqueous solution, **6**: 270
 Heat of combustion, **5**: 165
Dimethylmethylenecyclopropane
 Heat of combustion, **5**: 163
 β -**Dimethylnaphthalene**
 Specific heat, **5**: 113
2, 6-Dimethylnaphthalene
 Absorption spectra, ultra-violet, **5**: 363
2, 7-Dimethylnaphthalene
 Absorption spectra, ultra-violet, **5**: 363
 α -**Dimethylnaphthylamine**
 Absorption spectra, **5**: 333, 364
 Refractive index, **7**: 56
 Verdet constant, **6**: 430
 Viscosity, **7**: 221
 β -**Dimethylnaphthylamine**
 Absorption spectra, ultra-violet, **5**: 364
 Refractive index, **7**: 56
 Verdet constant, **6**: 430
 Viscosity, **7**: 221
Dimethylnitrosoamine
 Density, **3**: 28
 Electrical conductivity, **6**: 143
 Aqueous solution, **6**: 263
 Refractive index, **7**: 34
 Surface tension, **4**: 449
 -Tetraethylammonium iodide
 Density, **3**: 158
Dimethyl-2, 4-nonatriene
 Magnetic susceptibility, **6**: 363
2, 6-Dimethyl-2, 6, 8-nonatriene
 Magnetic susceptibility, **6**: 363
2, 6-Dimethyloctane
 Boiling point, **3**: 226
 Density, **3**: 30, 34
 Vapor pressure, **3**: 226
2, 7-Dimethyloctane
 Azeotropic mixtures, **3**: 321
 Viscosity, **7**: 221

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Dimethyloxamide**
Magnetic susceptibility, 6: 361
- Dimethylparabanic acid**
Electrical conductivity, aqueous solution, 6: 269
Heat of solution in water, 5: 149
- Dimethylpentanes**
Heat of combustion, 5: 163
- 2, 5-Dimethylphenol**
-Sulfuric acid
Freezing point-solubility, 4: 189
- 3, 4-Dimethylphenol**
-Sulfuric acid
Freezing point-solubility, 4: 189
- Dimethylphenylammonium iodide**
-Iodine-Nitrobenzene
Freezing point-solubility, 4: 270
- 2, 6-Dimethylpyridine**
Solubility in water, 3: 391
- Dimethylpyrroles, refractive index, 7: 39**
- 2, 5-Dimethylpyrone**
Cryoscopic constant, 4: 183
- 2, 6-Dimethylpyrone**
Electrical conductivity, aqueous solution, 6: 281
- Dimethyl- γ -pyrone**
Absorption spectra, 5: 342
Heat of fusion, 5: 133
Specific heat
Liquid, 5: 111
Solid, 5: 104
Surface tension, 4: 456
-Acetic acid*
-Acetonitrile*
-Benzoic acid*
-Chloroacetic acid*
- α -Chlorocrotonic acid*
-Cinnamic acid*
-Cresol (*o*-, *m*-, *p*-)*
- α -Crotonic acid*
-Dichloroacetic acid*
-Dichloromethane*
-2, 4-Dinitrophenol
Freezing point-solubility, 4: 126
-Formic acid
Freezing point-solubility, 4: 99
-Hydrocinnamic acid
Freezing point-solubility, 4: 151
- β -Iodopropionic acid
Freezing point-solubility, 4: 111
-Mandelic acid
Freezing point-solubility, 4: 151
-Naphthol (α -, β -)
Freezing point-solubility, 4: 151
-*o*-Nitrobenzoic acid
Freezing point-solubility, 4: 146
-Nitrophenol (*o*-, *m*-, *p*-)
Freezing point-solubility, 4: 129-131
-Phenol
Freezing point-solubility, 4: 136
-Phenylacetic acid
Freezing point-solubility, 4: 151
-Picric acid
Freezing point-solubility, 4: 120
-Propionitrile
Boiling point elevation, 3: 338
-Salicylic acid
Freezing point-solubility, 4: 149
-Sulfuric acid
Freezing point-solubility, 4: 188
-Toluic acid (*o*-, *m*-, *p*-)
Freezing point-solubility, 4: 151
-Trichloroacetic acid
Freezing point-solubility, 4: 103
-Trichlorobutyric acid
Freezing point-solubility, 4: 113
-Trichlorolactic acid
Freezing point-solubility, 4: 111
-1, 3, 5-Trinitrobenzene
Freezing point-solubility, 4: 118
- Dimethyl- γ -pyrone.—(Continued)**
-2, 4, 6-Trinitrotoluene
Freezing point-solubility, 4: 146
- Dimethylpyrone hydrobromide**
-Chloroform*
- Dimethylpyrone picrate**
-Benzene*
-Carbon tetrachloride*
-Chloroform*
-Dichloromethane*
- Dimethylquinol**
Verdet constant, 6: 429
- Dimethylresorcinol**
Verdet constant, 6: 429
- Dimethylsilicane**
Boiling point, 3: 217
Density, gas, 3: 3
Vapor pressure, 3: 217
- α , β -Dimethylstyrene
Heat of combustion, 5: 163
Refractive index, 7: 50
- α , ω -Dimethylstyrene
Magnetic susceptibility, 6: 363
- Dimethylsuccinic acid**
Crystallography, 1: 332
Electrical conductivity, aqueous solution, 6: 275
Heat of combustion, 5: 165
Optical rotatory power, 7: 404
- Dimethylsuccinic anhydride**
Heat of combustion, 5: 166
- Dimethylsulfoxide nitrate**
-Chloroform*
- Dimethyl-*o*-toluidine**
Boiling point, 3: 225
Critical point data, 3: 249
Density, 3: 30
Dielectric constant, 6: 94
Refractive index, 7: 47
Specific heat, 5: 112
Surface tension, 4: 459
Vapor pressure, 3: 225
Verdet constant, 6: 430
Viscosity, 7: 220
-Benzene*
-Toluene
Density, 3: 188
Surface tension, 4: 474
- Dimethyl-*p*-toluidine**
Absorption spectra, 5: 333
Boiling point, 3: 225
Dielectric constant, 6: 94
Refractive index, 7: 47
Vapor pressure, 3: 225
Verdet constant, 6: 430
Viscosity, 7: 220
- Dimethyltoluidine hydrochloride (*o*-, *p*-)**
Verdet constant, 6: 430
- Dimethylurea**
Density, aqueous solution, 3: 114
-Phenol
Freezing point-solubility, 4: 112
- 1, 5-Dimethyl-3-vinyl-1-cyclohexene**
Heat of combustion, 5: 163
- Dinaphthalenethiophene**
-Aniline*
- 2, 4-Dinitroacetanilide**
-*p*-Nitroacetanilide
Freezing point-solubility, 4: 180
- 2, 4-Dinitroaniline**
Absorption spectra, 5: 339
-Methylamine
Density, 3: 152
Viscosity, 5: 35
-Nitroaniline (*o*-, *p*-)
Freezing point-solubility, 4: 177
- 2, 4-Dinitroanisole**
-2, 6-Dinitroanisole
Freezing point-solubility, 4: 148
-2, 4-Dinitrophenetole
Freezing point-solubility, 4: 179
- 2, 6-Dinitroanisole**
-2, 4-Dinitroanisole*
- Dinitrobenzene**
Explosive, properties as, 7: 490
-Isobutyl bromide
Boiling point elevation, 3: 341
-Propionic acid
Boiling point elevation, 3: 339
-Sulfuric acid
Freezing point-solubility in water, 4: 398
- o*-Dinitrobenzene**
Absorption spectra, 5: 338
Heat of combustion, 5: 167
Heat of fusion, 5: 133
Specific heat
Liquid, 5: 109
Solid, 5: 103
Surface tension, 4: 453
-Acenaphthene*
-*m*-Aminophenol*
-Aniline*
-Anthracene*
-Benzene*
-Carbazole*
-*m*-Dinitrobenzene
Freezing point-solubility, 4: 175
-2, 4-Dinitrotoluene
Freezing point-solubility, 4: 175
-Fluorene
Freezing point-solubility, 4: 176
-*m*-Hydroxybenzaldehyde
Freezing point-solubility, 4: 124
-Naphthalene
Freezing point-solubility, 4: 176
-Naphthylamine (α -, β -)
Freezing point-solubility, 4: 176
-Phenanthrene
Freezing point-solubility, 4: 176
-Phenylenediamine (*o*-, *m*-)
Freezing point-solubility, 4: 124
-*p*-Toluidine
Freezing point-solubility, 4: 124
-1, 3, 5-Trinitrobenzene
Freezing point-solubility, 4: 174
-2, 4, 6-Trinitrotoluene
Freezing point-solubility, 4: 175
-Triphenylcarbinol
Freezing point-solubility, 4: 124
-Urea
Freezing point-solubility, 4: 100
- m*-Dinitrobenzene**
Absorption spectra, 5: 338
Cryoscopic constant, 4: 183
Dielectric constant, 6: 89
Diffusion in benzene, 5: 74
Diffusion in methyl alcohol, 5: 72
Flash point, 2: 162
Heat of combustion, 5: 168
Heat of explosion, 7: 490
Heat of fusion, 5: 133
Magnetic susceptibility, 6: 362
Specific heat
Liquid, 5: 109
Solid, 5: 103
Surface tension, 4: 453
Verdet constant, 6: 429
Viscosity, 7: 217
-Acenaphthene*
-Acetanilide*
-*m*-Aminophenol*
-Aniline*
-Anthracene*
-Antimony tribromide*
-Antimony trichloride*
-Benzene*
-Camphor*
-Carbazole*
-Chloroform*
-*o*-Dinitrobenzene*

* Data for system will be found under this compound in Index. Full explanation on page vii.

m-Dinitrobenzene.—(Continued)

- Diphenylamine
Freezing point-solubility, **4**: 125
- 2, 4-Dinitrotoluene
Freezing point-solubility, **4**: 176
- Ethyl acetate
Density, **3**: 166
Freezing point-solubility, **4**: 115
Pressure, effect of, **4**: 265
Heat of solution, **5**: 153
- Ethyl alcohol
Boiling point elevation, **3**: 336
Heat of solution, **5**: 152
- Ethyl ether
Heat of solution, **5**: 153
- Fluorene
Freezing point-solubility, **4**: 176
- m-Hydroxybenzaldehyde
Freezing point-solubility, **4**: 125
- Naphthalene
Density, **3**: 174
Freezing point-solubility, **4**: 125
- Naphthalene-Toluene
Density, **3**: 197
- Naphthylamine (α -, β -)
Freezing point-solubility, **4**: 125
- Nitroaniline (*m*-, *p*-)
Freezing point-solubility, **4**: 124
- Nitrobenzene
Freezing point solubility, **4**: 124
- Nitrogen tetroxide
Boiling point elevation, **3**: 329
- Nitromethane
Boiling point elevation, **3**: 333
- p-Nitrotoluene
Freezing point-solubility, **4**: 176
- Phenanthrene
Freezing point-solubility, **4**: 176
- Phenylenediamine (*o*-, *m*-, *p*-)
Freezing point-solubility, **4**: 124
- Picric acid
Freezing point-solubility, **4**: 175
- Toluene
Density, **3**: 174
- p-Toluidine
Freezing point-solubility, **4**: 125
- 1, 3, 5-Trinitrobenzene
Freezing point-solubility, **4**: 174
- 2, 4, 6-Trinitrotoluene
Freezing point-solubility, **4**: 176
- Triphenylcarbinol
Freezing point-solubility, **4**: 125
- Urea
Freezing point-solubility, **4**: 100
- Urethan
Freezing point-solubility, **4**: 112
- p-Dinitrobenzene**
Absorption spectra, **5**: 338
Heat of combustion, **5**: 168
Heat of fusion, **5**: 133
Specific heat
Liquid, **5**: 110
Solid, **5**: 103
Surface tension, **4**: 453
- Acenaphthene*
- Aniline*
- Anthracene*
- Benzene*
- Carbazole*
- Fluorene
Freezing point-solubility, **4**: 176
- m-Hydroxybenzaldehyde
Freezing point-solubility, **4**: 125
- Iodine
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 34
- Naphthalene
Freezing point-solubility, **4**: 125
- Naphthylamine (α -, β -)
Freezing point-solubility, **4**: 125

p-Dinitrobenzene.—(Continued)

- Phenanthrene
Freezing point-solubility, **4**: 125
- Phenylenediamine (*o*-, *m*-, *p*-)
Freezing point-solubility, **4**: 125
- p-Toluidine
Freezing point-solubility, **4**: 125
- Triphenylcarbinol
Freezing point-solubility, **4**: 126
- Urea
Freezing point-solubility, **4**: 100
- 2, 4-Dinitrobenzoic acid**
Crystallography, **1**: 327
Electrical conductivity, aqueous solution, **6**: 277
- Chloroform*
- Ethyl ether
Distribution coefficients in water, **3**: 429
- Xylene
Distribution coefficients in water, **3**: 429
- 3, 5-Dinitrobenzoic acid**
Crystallography, **1**: 327
Electrical conductivity, aqueous solution, **6**: 277
Solubility in water, **3**: 390; **4**: 253
Pressure, effect of, **3**: 393
- Benzene*
- Chloroform*
- Ethyl ether
Distribution coefficients in water, **3**: 429
- Hydrogen chloride
Freezing point-solubility in water, **4**: 396
- Potassium chloride
Freezing point-solubility in water, **4**: 418
- Potassium nitrate
Freezing point-solubility in water, **4**: 418
- Sodium chloride
Freezing point-solubility in water, **4**: 418
- Xylene
Distribution coefficients in water, **3**: 429
- 3, 4-Dinitrobromobenzene**
Crystal nuclei, formation of, **5**: 60
- Dinitrobromomethane, electrical conductivity, aqueous solution, **6**: 261
- Dinitrochlorobenzene
Flash point, **2**: 162
Solution velocity in ether, **5**: 60
- 2, 4-Dinitrochlorobenzene**
Birefringence, magnetic, **7**: 111
Surface tension, **4**: 453
- α -Naphthylamine
Freezing point-solubility, **4**: 118
- Nitroaniline (*o*-, *m*-)
Freezing point-solubility, **4**: 118
- Picryl chloride
Freezing point-solubility, **4**: 117
- 3, 4-Dinitrochlorobenzene**
Crystallization velocity, **5**: 61
Surface tension, **4**: 453
- 4, 5-Dinitro-1, 2-dimethoxybenzene**
Surface tension, **4**: 457
- m-Dinitrodiphenylcarbamide**
Transition temperature, **4**: 8
- Dinitroethane
Absorption spectra, **5**: 335
Electrical conductivity, aqueous solution, **6**: 262
- Dinitromesitylene
Crystallography, **1**: 328
- Acetonitrile*
- Formic acid
Boiling point elevation, **3**: 333

Dinitromesitylene.—(Continued)

- Methyl alcohol
Boiling point elevation, **3**: 334
- Dinitromethane
Absorption spectra, **5**: 334
Electrical conductivity, aqueous solution, **6**: 261
- 2, 4-Dinitromethylaniline**
Heat of combustion, **5**: 168
- Dinitronaphthalene
Diffusion in benzene, **5**: 74
Diffusion in methyl alcohol, **5**: 73
- 1, 5-Dinitronaphthalene**
-1, 8-Dinitronaphthalene
Freezing point-solubility, **4**: 155
- 1, 8-Dinitronaphthalene- α -Nitronaphthalene
Freezing point-solubility, **4**: 171
- 1, 8-Dinitronaphthalene-1, 3, 5-Trinitronaphthalene
Freezing point-solubility, **4**: 170
- 1, 8-Dinitronaphthalene-, 1, 3, 8-Trinitronaphthalene
Freezing point-solubility, **4**: 171
- α -Nitronaphthalene
Freezing point-solubility, **4**: 155
- 1, 3, 5-Trinitronaphthalene
Freezing point-solubility, **4**: 155
- 1, 3, 8-Trinitronaphthalene
Freezing point-solubility, **4**: 155
- 1, 8-Dinitronaphthalene**
-1, 5-Dinitronaphthalene*
-1, 5-Dinitronaphthalene*- α -Nitronaphthalene
-1, 5-Dinitronaphthalene*-1, 3, 5-Trinitronaphthalene
-1, 5-Dinitronaphthalene*1-, 3, 8-Trinitronaphthalene
- α -Nitronaphthalene
Freezing point-solubility, **4**: 155
- 1, 3, 5-Trinitronaphthalene
Freezing point-solubility, **4**: 155
- 1, 3, 8-Trinitronaphthalene
Freezing point-solubility, **4**: 155
- 2, 4-Dinitrophenetole**
Absorption spectra, **5**: 343
- 2, 4-Dinitroanisole*
- 2, 3-Dinitrophenol**
Absorption spectra, **5**: 338
Crystallography, **1**: 326
Electrical conductivity, aqueous solution, **6**: 271
Solubility in water, **3**: 388; **4**: 252
- Benzene*
- 2, 4-Dinitrophenol**
Absorption spectra, **5**: 338
Diffusion in methyl alcohol, **5**: 72
Electrical conductivity, aqueous solution, **6**: 271
Heat of combustion, **5**: 168
Magnetic susceptibility, **6**: 362
Solubility in water, **3**: 388
Surface tension, **4**: 453
Vapor pressure
Liquid, **3**: 220
Solid, **3**: 209
- Acenaphthene*
- Acetanilide*
- Acetophenone*
- Aniline*
- Anthracene*
- Antipyrine*
- Azobenzene*
- Benzene*
- Benzhydrol*
- Benzophenone*
- Camphor*
- Carbazole*
- Cinnamic acid*
- Dimethyl oxalate*
- Dimethylpyrone*

* Data for system will be found under this compound in Index. Full explanation on page vii.

2, 4-Dinitrophenol.—(Continued)

- Diphenylamine*
Freezing point-solubility, **4**: 126
- Fenchone*
Freezing point-solubility, **4**: 126
- Fluorene*
Freezing point-solubility, **4**: 176
- m-Hydroxybenzaldehyde*
Freezing point-solubility, **4**: 126
- Naphthalene*
Freezing point-solubility, **4**: 126
- Naphthylamine* (α -, β -)
Freezing point-solubility, **4**: 126
- Nitrogen tetroxide*
Boiling point elevation, **3**: 329
- o-Nitrophenol*
Freezing point-solubility, **4**: 176
- Phenanthrene*
Freezing point-solubility, **4**: 126
- Phenylenediamine* (o -, m -, p -)
Freezing point-solubility, **4**: 126
- Picric acid*
Freezing point-solubility, **4**: 175
- Succinic acid*
Freezing point-solubility, **4**: 114
- Succinimide*
Freezing point-solubility, **4**: 113
- Trimethylcarbinol*
Freezing point-solubility, **4**: 115
- 2, 5-Dinitrophenol**
Absorption spectra, **5**: 338
Electrical conductivity, aqueous solution, **6**: 271
Solubility in water, **3**: 388; **4**: 252
- Benzene**
- 2, 6-Dinitrophenol**
Absorption spectra, **5**: 338
Crystallography, **1**: 326
Electrical conductivity, aqueous solution, **6**: 271
Solubility in water, **3**: 389
- Benzene**
- 3, 4-Dinitrophenol**
Crystallography, **1**: 326
Electrical conductivity, aqueous solution, **6**: 271
Solubility in water, **3**: 389; **4**: 252
- Benzene**
- 3, 5-Dinitrophenol**
Electrical conductivity, aqueous solution, **6**: 271
- Dinitrophenols**
Vapor pressure, **3**: 220
- Methyl alcohol*
Density, **7**: 79
Refractive index, **7**: 79
- Di-(*o*-nitrophenyl) carbonate**
-*Di-(*o*-, *p'*-nitrophenyl) carbonate*
Freezing point-solubility, **4**: 162, 171
- Di-(*p*-nitrophenyl) carbonate*
Freezing point-solubility, **4**: 162, 171
- Di-(*o*-, *p'*-nitrophenyl) carbonate**
-*Di-(*o*-nitrophenyl) carbonate**
-*Di-(*p*-nitrophenyl) carbonate*
Freezing point-solubility, **4**: 162
- Di-(*p*-nitrophenyl) carbonate**
-*Di-(*o*-nitrophenyl) carbonate**
-*Di-(*o*-, *p'*-nitrophenyl) carbonate**
- Dinitroresorcinol**
Magnetic susceptibility, **6**: 362
- Camphor**
- Dinitrotetrammine cobaltic chloride**
Solubility in aqueous solutions, **7**: 328
- Dinitrotetrammine cobaltic dioxalotriamine cobaltate**
Solubility in aqueous solution, **7**: 334
- Dinitrotetrammine cobaltic nitrate**
Solubility in aqueous solutions, **7**: 328, 329
- Dinitrotetrammine cobaltic perchlorate**
Solubility in aqueous solutions, **7**: 328

- Dinitrotetrammine cobaltic sulfate**
Solubility in aqueous solutions, **7**: 332
- Dinitrotetrammine cobaltic tetranitrodiammine cobaltate**
Solubility in aqueous solution, **7**: 332
- Dinitrotetrammine cobaltic tetrathiocyanatodiammine chromiate**
Solubility in aqueous solutions, **7**: 337
- 2, 3-Dinitrotoluene**
Heat of combustion, **5**: 168
- 2, 4-Dinitrotoluene**
Cryoscopic constant, **4**: 183
Crystallography, **1**: 327
Heat of combustion, **5**: 168
Heat of fusion, **5**: 133
Refractive index, **7**: 30
- Acenaphthene**
- m-Aminophenol**
- Aniline**
- Anthracene**
- Benzene**
- Carbazole**
- Diethyl tartrate**
- Dinitrobenzene* (o -, m -)*
- 2, 6-Dinitrotoluene*
Freezing point-solubility, **4**: 179
- Diphenylamine*
Freezing point-solubility, **4**: 147
- Fluorene*
Freezing point-solubility, **4**: 179
- m-Hydroxybenzaldehyde*
Freezing point-solubility, **4**: 147
- Naphthalene*
Freezing point-solubility, **4**: 147
- Naphthylamine* (α -, β -)
Freezing point-solubility, **4**: 147
- Nitrotoluene* (o -, p -)
Freezing point-solubility, **4**: 170, 179
- p-Nitrotoluene-2, 4, 6-Trinitrotoluene*
Freezing point-solubility, **4**: 170
Refractive index, **7**: 97
- Phenanthrene*
Freezing point-solubility, **4**: 148
- Phenylenediamine* (o -, m -, p -)
Freezing point-solubility, **4**: 143
- Picric acid*
Freezing point-solubility, **4**: 175
- p-Toluidine*
Freezing point-solubility, **4**: 147
- 2, 4, 6-Trinitrotoluene*
Freezing point-solubility, **4**: 178
- Triphenylcarbinol*
Freezing point-solubility, **4**: 148
- Urea*
Freezing point-solubility, **4**: 100
- 2, 5-Dinitrotoluene**
Heat of combustion, **5**: 168
- 2, 6-Dinitrotoluene**
Crystallography, **1**: 327
Heat of combustion, **5**: 168
Refractive index, **7**: 30
- Acenaphthene**
- Aniline**
- Anthracene**
- Benzene**
- Diethyl tartrate**
- 2, 4-Dinitrotoluene**
- Fluorene*
Freezing point-solubility, **4**: 148
- Naphthylamine* (α -, β -)
Freezing point-solubility, **4**: 148
- p-Nitrotoluene*
Freezing point-solubility, **4**: 179
- Phenanthrene*
Freezing point-solubility, **4**: 148
- p-Toluidine*
Freezing point-solubility, **4**: 148
- 2, 4, 6-Trinitrotoluene*
Freezing point-solubility, **4**: 146, 178

- 3, 4-Dinitrotoluene**
Heat of combustion, **5**: 168
- Acenaphthene**
- Aniline**
- Anthracene**
- Benzene**
- Fluorene*
Freezing point-solubility, **4**: 148
- Naphthylamine* (α -, β -)
Freezing point-solubility, **4**: 148
- Phenanthrene*
Freezing point-solubility, **4**: 148
- p-Toluidine*
Freezing point-solubility, **4**: 148
- 3, 5-Dinitrotoluene**
Crystallography, **1**: 327
Heat of combustion, **5**: 168
- Acenaphthene**
- Aniline**
- Anthracene**
- Fluorene*
Freezing point-solubility, **4**: 148
- Naphthylamine* (α -, β -)
Freezing point-solubility, **4**: 148
- p-Toluidine*
Freezing point-solubility, **4**: 148
- 2, 3-Dinitro-*p*-xylene**
Crystallography, **1**: 328
- 2, 6-Dinitro-*p*-xylene*
Freezing point-solubility, **4**: 153
- Diodes**, **6**: 58
- Diopside**
Compressibility, **3**: 50
Crystal nuclei, formation of, **5**: 60
Density, **1**: 146
Melting point, **1**: 54, 146; **4**: 84
Refractive index, **1**: 146, 172; **7**: 25
Specific heat, **2**: 101; **5**: 99
- Akermanite**
- Albite**
- Albite**-*Anorthite*
- Anorthite**
- Calcium silicate**
- Forsterite-Silica*
Freezing point-solubility, **4**: 94, 96
- Magnesium orthosilicate*
Freezing point-solubility, **4**: 85, 89
- Magnesium silicate*
Freezing point-solubility, **4**: 85, 89
- Nephelite*
Freezing point-solubility, **4**: 90, 92
- Silica*
Freezing point-solubility, **4**: 85, 88
- Diophtase**
Density, **1**: 123
Magnetic susceptibility, **6**: 364
Refractive index, **1**: 123, 167; **7**: 21
- Diorite**
Bulk density, **2**: 53
Compressibility, **3**: 51
Compressive strength, **2**: 47
Dielectric constant, **6**: 105
Hardness, **2**: 50
Impact hardness, **2**: 51
Porosity, **2**: 54
Thermal conductivity, **2**: 55
Thermal diffusivity, **2**: 56
- Dioxindol**, heat of combustion, **5**: 168
- Dipentene**
Absorption spectra, **5**: 346
Dielectric constant, **6**: 95
- Camphene**
- Dipentene dihydrochloride**
Verdet constant, **6**: 430
- Dipheneserine**
Optical rotatory power, **7**: 477
- Diphenic acid**
Electrical conductivity, aqueous solution, **6**: 300
Solubility in water, **4**: 253

* Data for system will be found under this compound in Index. Full explanation on page vii.

Diphenic acid.—(Continued)

-Hydrogen chloride

Freezing point-solubility in water, 4: 397

Diphenyl

Absorption spectra, 5: 333, 348, 375, 378

Boiling point, 3: 227, 347

Cryoscopic constant, 4: 184

Diffusion in benzene, 5: 74

Diffusion in methyl alcohol, 5: 73

Diffusion of vapor in air, 5: 63

Heat of combustion, 5: 164

Heat of fusion, 5: 134

Magnetic susceptibility, 6: 363

Photoluminescence, 5: 387

Refractive index, 7: 56

Specific heat, 5: 104

Surface tension, 4: 461

Vapor pressure, 3: 227

Verdet constant, 6: 430

-Acetone*

-Acetonitrile*

-Antimony tribromide*

-Antimony trichloride*

-Antimony triiodide*

-Benzene*

-Benzil*

-Benzoyl chloride*

-Carbon disulfide*

-Chloroform*

-Cyclohexane*

-Cyclopentane*

-Ethyl acetate

Density, 3: 167

-Ethyl alcohol

Heat of solution, 5: 153

-Ethyl chloride

Boiling point elevation, 3: 336

-Ethyl ether

Density, 3: 168

-Hexane

Density, 3: 186

-Iodine

Freezing point lowering, 4: 37

-Isoamyl acetate

Density, 3: 190

Viscosity, 5: 50

-Lophine

Boiling point elevation, 3: 347

-Methyl alcohol

Refractive index, 7: 80

-Naphthalene

Freezing point-solubility, 4: 180

-Nitrobenzene

Density, 3: 177

-Phosgene

Boiling point elevation, 3: 330

-Picric acid

Freezing point-solubility, 4: 121

-Pyridine

Boiling point elevation, 3: 342

-Quinoline

Density, 7: 87

Refractive index, 7: 87

Dispersion, 7: 106

-Styphnic acid

Freezing point-solubility, 4: 122

-Sulfur

Boiling point elevation, 3: 347

Freezing point lowering, 4: 38

-Toluene

Density, 3: 188

Viscosity, 5: 49

Diphenyl carbonate, surface tension, 4: 461**Diphenyl ether.** See Phenyl ether.**Diphenyl mercury**

Absorption spectra, solutions, 5: 328

Diphenyl selenide

-Diphenyl sulfide

Freezing point-solubility, 4: 161

Diphenyl selenide.—(Continued)

-Diphenyl telluride

Freezing point-solubility, 4: 161

Diphenyl sulfide

Absorption spectra, 5: 348

Verdet constant, 6: 430

-Diphenyl selenide*

-Diphenyl telluride

Freezing point-solubility, 4: 161

-Phenyl ether

Freezing point-solubility, 4: 161

Diphenyl telluride

-Diphenyl selenide*

-Diphenyl sulfide*

Diphenylacetic acid

Electrical conductivity, aqueous solution, 6: 300

Heat of combustion, 5: 166

Solubility in water, 4: 253

-Hydrogen chloride

Freezing point-solubility in water, 4: 397

Diphenylacetic anhydride

Heat of combustion, 5: 166

Diphenylacetone

-Isoamyl acetate

Density, 3: 190

Viscosity, 5: 50

Diphenylacetylene

Crystallography, 1: 333

-Isoamyl acetate

Density, 3: 190

Viscosity, 5: 50

Diphenylamine

Absorption spectra, 5: 333, 348, 375

Compressibility, 3: 39

Cryoscopic constant, 4: 184, 215

Crystallization velocity, 5: 61

Dielectric constant, 6: 96

Heat of combustion, 5: 168

Heat of fusion, 5: 134

Magnetic susceptibility, 6: 363

Melting point under pressure, 4: 16

Photoelectric threshold, 6: 68

Photoluminescence, 5: 387

Solubility in water, 3: 392

Specific heat

Liquid, 5: 113

Solid, 5: 104

Surface tension, 4: 461

Thermal conductivity, 5: 216

Vapor pressure, 3: 227

Viscosity, 5: 43, 48; 7: 221

Volume change on melting, 4: 16

-Acetic acid*

-Acetone*

-Acetonitrile*

-Acetyldiphenylamine*

-Amyl acetate*

-Aniline*

-Anthracene*

-Benzene*

-Benzoic acid*

-Benzonitrile*

-Benzophenone*

-Butyric acid*

-Carbon disulfide*

-Catechol*

-Cetyl alcohol*

-Chloroform*

-Chloronitrobenzene (o-, p-)*

-Cinnamylideneacetophenone*

-p-Cymene*

-2, 4-Dichloroaniline*

-1, 1-Dichloroethane*

-m-Dinitrobenzene*

-2, 4-Dinitrophenol*

-2, 4-Dinitrotoluene*

-Ethyl alcohol

Boiling point elevation, 3: 337

Diphenylamine.—(Continued)

-Ethyl alcohol-Ethyl ether

Vapor pressure, aqueous solution, 3: 378

-Ethyl bromide

Boiling point elevation, 3: 336

-Ethyl disulfide

Boiling point elevation, 3: 342

-Ethyl ether

Boiling point elevation, 3: 341

Heat of solution, 5: 153

-Ethyl iodide

Boiling point elevation, 3: 336

-Ethylene bromide

Boiling point elevation, 3: 335

Freezing point-solubility, 4: 173

-Ethylene chloride

Boiling point elevation, 3: 335

-Hydrogen chloride

Freezing point-solubility in water, 4: 397

-Hydroquinol

Freezing point-solubility, 4: 140

-Isoamyl acetate

Boiling point, 3: 346

Density, 3: 190

Viscosity, 5: 50

-Isoamyl alcohol

Boiling point elevation, 3: 343

-Isopentane

Solubility, mutual, 3: 396

-Methyl acetate

Boiling point elevation, 3: 339

-Methyl alcohol

Boiling point elevation, 3: 334

-Methyl iodide

Boiling point elevation, 3: 333

-Methyl sulfide

Boiling point elevation, 3: 338

-Methyl thiocyanate

Boiling point elevation, 3: 335

-Naphthalene

Freezing point-solubility, 4: 180

-Naphthol (α-, β-)

Freezing point-solubility, 4: 156, 157

-α-Naphthylamine

Freezing point-solubility, 4: 158

-p-Nitroanisole

Freezing point-solubility, 4: 179

-Nitrobenzene

Boiling point elevation, 3: 343

-Nitromethane

Boiling point elevation, 3: 333

-α-Nitronaphthalene

Density, 3: 193

Freezing point-solubility, 4: 155

-Nitrophenol (o-, m-, p-)

Freezing point-solubility, 4: 130-132

-p-Nitrotoluene

Freezing point-solubility, 4: 150

-Phenol

Density, 3: 184

Freezing point-solubility, 4: 137

Viscosity, 5: 48

-Picric acid

Freezing point-solubility, 4: 121

-Piperidine

Boiling point elevation, 3: 343

-Propionic acid

Boiling point elevation, 3: 339

-Propionitrile

Boiling point elevation, 3: 338

-Pyridine

Boiling point elevation, 3: 342

-Pyrogallol

Freezing point-solubility, 4: 141

-p-Quinone

Freezing point-solubility, 4: 127

-Resorcinol

Freezing point-solubility, 4: 139

* Data for system will be found under this compound in Index. Full explanation on page vii.

Diphenylamine.—(Continued)

- p*-Toluidine
 - Boiling point elevation, **3**: 346
 - Freezing point-solubility, **4**: 152
- 1, 3, 5-Trinitrobenzene
 - Density, **3**: 173
- 2, 4, 6-Trinitrotoluene
 - Freezing point-solubility, **4**: 146
- Urethan
 - Freezing point-solubility, **4**: 112
- Diphenylarsenic acid**
 - Benzene*
- Diphenylbutadiene**
 - Absorption spectra, ultra-violet, **5**: 378
 - Heat of combustion, **5**: 164
 - Benzalazine*
 - Cinnamylideneaniline*
 - Cinnamylidene- β -naphthylamine*
 - Dibenzylhydrazine*
 - Diphenyldiacetylene
 - Freezing point-solubility, **4**: 164
 - Isoamyl acetate
 - Density, **3**: 190
 - Viscosity, **5**: 50
- Diphenylbutane**
 - Absorption spectra, **5**: 351
 - Isoamyl acetate
 - Density, **3**: 190
 - Viscosity, **5**: 50
- α , γ -Diphenyl- α , β -butene
 - Carbon tetrachloride*
- Diphenylcarbinol**
 - Absorption spectra, **5**: 349
 - Heat of combustion, **5**: 164
 - Isoamyl acetate
 - Density, **3**: 190
 - Viscosity, **5**: 50
- Diphenylchloroarsine**
 - Magnetic susceptibility, **6**: 363
 - Vapor pressure, **3**: 227
- Diphenyldiacetylene**
 - Heat of combustion, **5**: 164
 - Magnetic susceptibility, **6**: 364
 - Benzalazine*
 - Cinnamylideneaniline*
 - Diphenylbutadiene*
- Diphenyldiazomethane**
 - Absorption spectra, ultra-violet, **5**: 379
- sym.*-Diphenyldimethylethylenediamine
 - Benzene*
- Diphenylene oxide**
 - Absorption spectra, **5**: 348
 - Refractive index, **7**: 56
 - Quinoline
 - Density, **7**: 87
 - Refractive index, **7**: 87
 - Dispersion, **7**: 106
- Diphenyleneglycollic acid**
 - Solubility in water, **4**: 253
 - Hydrogen chloride
 - Freezing point-solubility in water, **4**: 397
- 1, 1-Diphenylethane**
 - Surface tension, **4**: 461
 - Isoamyl acetate
 - Density, **3**: 190
 - Viscosity, **5**: 50
- 1, 2-Diphenylethane**
 - Surface tension, **4**: 461
- 1, 4-Diphenyl-1-ethyl-3-butene**
 - Heat of combustion, **5**: 164
- 1, 1-Diphenylethylene**
 - Absorption spectra, **5**: 350, 378
 - Birefringence, magnetic, **7**: 112
 - Magnetic susceptibility, **6**: 363
 - Isoamyl acetate
 - Density, **3**: 190
 - Viscosity, **5**: 50
- 1, 6-Diphenylhexa-1, 5-diene**
 - Heat of combustion, **5**: 164

- Diphenylhexatriene**
 - Heat of combustion, **5**: 164
- Diphenyliodonium chloride**
 - Density, aqueous solution, **3**: 61
- Diphenyliodonium nitrate**
 - Density, aqueous solution, **3**: 63
- Diphenyliodonium sulfate**
 - Density, aqueous solution, **3**: 61
- Diphenylmaleic anhydride**
 - Crystallography, **1**: 334
 - Heat of combustion, **5**: 166
- Diphenylmethane**
 - Absorption spectra, **5**: 349, 378
 - Boiling point, **3**: 227
 - Cryoscopic constant, **4**: 184
 - Dielectric constant, **6**: 96
 - Heat of combustion, **5**: 164
 - Heat of fusion, **5**: 134
 - Magnetic susceptibility, **6**: 363
 - Melting point under pressure, **4**: 10
 - Photoelectric threshold, **6**: 68
 - Photoluminescence, **5**: 387
 - Refractive index, **7**: 59
 - Surface tension, **4**: 461
 - Vapor pressure, **3**: 227
 - Verdet constant, **6**: 430
 - Viscosity, **5**: 28; **7**: 221
 - Antimony tribromide*
 - Antimony trichloride*
 - Benzoyl chloride*
 - Catechol*
 - Hydroquinol
 - Freezing point-solubility, **4**: 140
 - Naphthalene
 - Freezing point-solubility, **4**: 180
 - Naphthol (α -, β -)
 - Freezing point-solubility, **4**: 156, 157
 - Naphthylamine (α -, β -)
 - Freezing point-solubility, **4**: 158
 - m*-Nitrophenol
 - Freezing point-solubility, **4**: 131
 - p*-Nitrophenol
 - Freezing point solubility, **4**: 132
 - Phenol
 - Freezing point-solubility, **4**: 137
 - p*-Phenylenediamine
 - Freezing point-solubility, **4**: 144
 - Picric acid
 - Freezing point-solubility, **4**: 121
 - Pyrogallol
 - Freezing point-solubility, **4**: 141
 - Quinoline
 - Density, **7**: 87
 - Refractive index, **7**: 87
 - Dispersion, **7**: 107
 - Resorcinol
 - Freezing point-solubility, **4**: 139
 - Styphnic acid
 - Freezing point-solubility, **4**: 122
- Diphenylmethylaniline**
 - Viscosity, **5**: 44, 48
 - o*-Chlorophenol*
 - Phenol
 - Density, **3**: 184
 - Freezing point-solubility, **4**: 137
 - Viscosity, **5**: 48
- Diphenylphenoxyarsine**
 - Magnetic susceptibility, **6**: 364
- Diphenylphenylethynylcarbinol**
 - Heat of combustion, **5**: 164
- Diphenylpiperazine**
 - Benzene*
- 1, 1-Diphenylpropane**
 - Surface tension, **4**: 462
- Diphenylstyrene**
 - Heat of combustion, **5**: 164
- Diphenylsuccinic acid**
 - Electrical conductivity, aqueous solution, **6**: 301
 - Heat of combustion, **5**: 166
 - Optical rotatory power, **7**: 405

- Diphenylsuccinic anhydride**
 - Crystallography, **1**: 334
 - Heat of combustion, **5**: 166
- 1, 2-Diphenylthiourea**
 - Pyridine
 - Viscosity, **5**: 43
- sym.*-Diphenylurea
 - Absorption spectra, **5**: 349
 - Heat of combustion, **5**: 168
 - Acetone*
 - Boiling point elevation, **3**: 337
 - Pyridine
 - Viscosity, **5**: 42
- unsym.*-Diphenylurea
 - Absorption spectra, **5**: 349
 - Heat of combustion, **5**: 168
- Dipotassium dihydrogen disulfate**
 - Potassium pyrosulfate
 - Freezing point-solubility, **4**: 71
- Dipping brass**, **2**: 375; *cf.* 555, 601
- Dipropyl ether**
 - Boiling point, **3**: 222
 - Vapor pressure, **3**: 222
- Dipropyl ketone**
 - Absorption spectra, **5**: 333, 342
 - Birefringence, electric, **7**: 111
 - Dielectric constant, **6**: 92
 - Heat of combustion, **5**: 167
 - Heat of vaporization, **5**: 137
 - Refractive index, **7**: 42
 - Specific heat, **5**: 111
 - Surface tension, **4**: 457
 - Verdet constant, **6**: 429
 - Viscosity, **7**: 219
- Dipropyl malonate**, specific heat, **5**: 112
- Dipropyl oxalate**, specific heat, **5**: 112
- Dipropyl succinate**, specific heat, **5**: 112
- Dipropyl tartrate**
 - Density, **3**: 30
 - Verdet constant, **6**: 426
 - Dispersion, **6**: 433
 - Benzene*
 - Ethyl bromide
 - Density, **3**: 158
 - Isobutyl alcohol
 - Density, **3**: 168
- Dipropylacetic acid**
 - Heat of combustion, **5**: 165
 - Viscosity, **7**: 220
- Dipropylacetone**, viscosity, **7**: 220
- Dipropylamine**
 - Absorption spectra, **5**: 332, 340
 - Boiling point, **3**: 346
 - Critical point data, **3**: 249
 - Density, **3**: 29
 - Dielectric constant, **6**: 91
 - Electrical conductivity, aqueous solution, **6**: 277
 - Freezing point lowering of aqueous solution, **4**: 263
 - Heat of solution in water, **5**: 150
 - Heat of vaporization, **5**: 137
 - Refractive index, **7**: 40
 - Specific heat, **5**: 110
 - Surface tension, **4**: 437, 455
 - Aqueous solution, **4**: 469
 - Thermal conductivity, gas, **5**: 214
 - Ethyl ether
 - Distribution coefficients in water, **3**: 429
 - Toluene
 - Distribution coefficients in water, **3**: 429
 - Xylene
 - Distribution coefficients in water, **3**: 429
- Dipropylammonium chloride**
 - Electrical conductivity, aqueous solution, **6**: 232
 - Chloroform*

p-Dipropylazophenol*-p-Azoanisole-phenetole***-p-Azophenetole***-p-Methylpropylazophenol*

Freezing point-solubility, 4: 165

Dipropylmalonic acid

Decomposition, kinetics of, 7: 122

Electrical conductivity, aqueous solution, 6: 293

Heat of combustion, 5: 166

 γ , γ -Dipyridyl*-1, 3, 5-Trinitrobenzene*

Freezing point-solubility, 4: 118

Dirigold (alloy), 2: 375, 582**Disilicane**

Density, 3: 23

Vapor pressure, 3: 214

Disilicoethane, density, gas, 3: 3**Disilicon hexachloride**

Vapor pressure, 3: 214

Disiloxane, vapor pressure, 3: 214**Disodium dihydrogen disulfate***-Sodium pyrosulfate*

Freezing point-solubility, 4: 69

Disodium dihydrogen pyrophosphate

Electrical conductivity, aqueous solution, 6: 248

Heat of formation, 5: 201

Refractive index, 7: 26

Disodium methyl arsenite

Magnetic susceptibility, 6: 360

Disodium ruthenium nitrite

Refractive index, 1: 152, 171

Dispersion. See Refractive index.**Dispersoidology, 1: 354****Dissociation**

Heat of, 5: 169, 418; 7: 224

Work of, 6: 69, 72, 73

Disthene, heat of formation, 5: 194**Distribution coefficients, 3: 418**

Non-aqueous solutions, 3: 434

Ditelluride ion, ionization constant, 7: 238**Dithallium tricesium chloride**

Refractive index, 7: 29

Dithionic acid

Density, aqueous solution, 3: 55

Electrical conductivity, aqueous solution, 6: 242

Freezing point lowering, aqueous solution, 4: 255

Heat of formation, 5: 178

Di-p-tolylmethane, surface tension, 4: 462**Dixenite**

Density, 1: 128

Refractive index, 1: 128, 167

Doctor metal, 2: 375**Dodecane**

Absorption spectra, 5: 333

Compressibility, 3: 37

Specific heat, 5: 113

Viscosity, 7: 221

Dodecaphenylpentastannane

Density, 3: 44

 β -Dodecyl dodecoate

Optical rotatory power, 7: 361

Dodecylene

Absorption spectra, 5: 333

Specific heat, 5: 113

Dolomite

Compressibility, 3: 50

Compressive strength, 2: 48

Density, 1: 146

Dielectric constant, 6: 99

Elasticity, 2: 52

Heat of formation, 5: 197

Magnetic susceptibility, 6: 364

Reflectivity, selective, 5: 260

Refractive index, 1: 146, 167; 7: 25

Solution velocity in acids, 5: 58, 59

Thermal conductivity, 5: 232

Dolomite.-(Continued)

Thermal expansion, 3: 44

See also Calcium magnesium carbonate.

Domeykite

Density, 1: 123

Melting point, 1: 123

Domingite, density, 1: 116**Downmetal, 2: 375, 544; cf. 604**

Electrical conductivity, 6: 162

Mechanical properties, 2: 544

Thermal conductivity, 5: 222, 223

Drain tile, water absorption, 2: 65**Driver-Harris alloys**

Electrical conductivity, 6: 185, 186

Drop weight correction, 4: 435**Drying agents, relative efficiencies, 3: 385****Drying oils. See Oils, vegetable.****Ductility, definition, 2: xii****Dudley's alloys, 2: 375****Dürfeldtite, density, 1: 116****Dufrenoy'site, density, 1: 116****Duke's metal, 2: 375****Dulcitol**

Crystallography, 1: 326

Freezing point lowering of aqueous solution, 4: 263

Heat of combustion, 5: 164

Heat of solution in water, 5: 150

Refractive index, aqueous solution, 7: 69

Specific heat, 5: 103

Aqueous solution, 5: 125

*-Boric acid****Dulcitol derivatives**

Optical rotatory power, 7: 388

Dumet (alloy), 2: 375; cf. 467, 481**Dumortierite**

Density, 1: 138

Refractive index, 1: 138, 172

Dundasite, density, 1: 137**Dunite, compressibility, 3: 51****Dunnlevic and Jones antifriction alloy, 2: 375; cf. 476****Duraloy, 2: 375; cf. 508****Duralumin, 2: 375, 468, 534, 601, 608**

Compression tests, 2: 538

Elastic properties, 2: 540

Electrical conductivity, 6: 162

Emission, spectral, 5: 254

Endurance limits, 2: 601

Hardness, 2: 539

Impact strength, 2: 540

Mechanical properties, 2: 534, 538

Shear tests, 2: 538

Tensile properties, 2: 534

Thermal expansion, 2: 464, 468

Viscosity, tangential coefficient, 5: 8

Durana metal, 2: 375; cf. 470, 556**Durand's alloy, 2: 375; cf. 468, 536****Durangite**

Density, 1: 153

Refractive index, 1: 153, 172

Durdenite, refractive index, 1: 128, 173**Durene***-Benzene***-Chloroform***-Ethyl acetate*

Density, 3: 167

-Hexane

Density, 3: 186

-Nitrobenzene

Density, 3: 177

-Toluene

Density, 3: 188

Durex (alloy), 2: 375**Duriron, 2: 375, 473**

Electrical conductivity, 6: 188

Dutch East Indies, weights and measures, 1: 5**Dutch metal, 2: 375; cf. 555, 601****Dyes**

Absorption spectra, 7: 173-211

Adsorption by charcoal, 3: 251

Adsorption on cotton, 3: 253

Adsorption on glass, 3: 252

Adsorption on uric acid, 3: 252

Fading of, 7: 165

Indicators, use as, 1: 84

Osmotic pressure, 4: 430

Photochemical oxidation, 7: 163

Rearrangement, kinetics of, 7: 127

Refractivity, 7: 15

-Isobutyl alcohol

Distribution coefficients in water, 3: 433

Dynamites, 7: 494**Dynamo steel**

Magnetic properties, 6: 374, 376

Dyne, definition, 1: 36**Dysoid (alloy), 2: 375****Dysprosium**

Cathodoluminescence, 5: 388, 390

Emission spectra, 5: 291

Persistent lines, 5: 323

X-ray absorption limits, 6: 40

X-ray emission spectra, 6: 40

X-ray series, limiting frequencies, 6: 35

Dysprosium chloride

Absorption spectra, solutions, 5: 329

Dysprosium ethyl sulfate

Density, 1: 140

Refractive index, 1: 140, 166

Dysprosium oxide

Magnetic susceptibility, 6: 359

"E" alloy, 2: 375, 538, 601, 608**E. B. D. bearing (alloy), 2: 375****Ear, sensitivity of, 1: 94; 6: 450****Earth**

Angular velocity of rotation, 1: 394

Characteristics, 1: 392

Form and size, 1: 394

Magnetic field, 6: 445

Mean effective viscosity, 1: 394

Motion, 1: 392

Rigidity, 1: 394

Rotational energy, 1: 394

Earth currents, 6: 449**Earths. See Clay.****Ebonite**

Contact charge, 6: 57

Density, 2: 312

Electrical conductivity, X-rays, effect of, 6: 6

Electrostriction, 6: 207

Magnetic susceptibility, 6: 364

Sound, velocity of, in, 6: 465

Thermal conductivity, 2: 312

Thermal diffusivity, 2: 315

Ecdemite, density, 1: 116**Ecgonine**

Absorption spectra, ultra-violet, 5: 369

Crystallography, 1: 329

Diffusion in water, 5: 71

Ecgoninic acid

Electrical conductivity, aqueous solution, 6: 282

Optical rotatory power, 7: 431

Echitamine, optical rotatory power, 7: 476**Ecliptic, definition, 1: 35****Ectropite**

Density, 1: 128

Refractive index, 1: 128, 174

Edgar Allen crucible steel

Electrical conductivity, 6: 200

Edingtonite

Density, 1: 148

Refractive index, 1: 148, 170

Edwards speculum, 2: 375**Eelgrass**

Density, 2: 313

Thermal conductivity, 2: 313

* Data for system will be found under this compound in Index. Full explanation on page vii.

Eglestonite
Density, 1: 121
Refractive index, 1: 121, 166

Egypt, weights and measures, 1: 6

Egypt, ancient, weights and measures, 1: 14

Ehrhardt's metal, 2: 375

Eicosane
Density, 3: 30, 34
Heat of combustion, 5: 164

Einheitsmetall, 2: 375; cf. 557

Einstein's relation (stopping potential), 6: 61

Eislers (bronze), 2: 375; cf. 559, 601

Elaidic acid
Absorption spectra, 5: 353
Cryoscopic constant, 4: 184
Esterification constant, 7: 138
Heat of combustion, 5: 166
Heat of fusion, 5: 134
-Isoamyl acetate
Viscosity, 5: 50

Elalco alloys, 2: 375

Elastic extension, heat of, 5: 147

Elastic limit, definition, 2: viii

Elastic modulus, definition, 1: 36; 2: x

Elasticity
Building materials, 2: 51
Concrete, 2: 119
Glass, 2: 97
Porcelain, 2: 69, 76
Whiteware, 2: 76

σ -Elaterin, optical rotatory power, 7: 464

Elateric acid, optical rotatory power, 7: 467

Elaterite, 2: 169

Elaterone, optical rotatory power, 7: 465

Electric arc, 6: 51
Luminous efficiency, 5: 438
Temperature, 5: 247

Electric circuit, oscillation, stabilizing frequency of, 6: 456

Electric displacement, total, conversion factors, 1: 26

Electric lamp, incandescent, luminous efficiency, 5: 437

Electric units, practical, 1: 40

Electrical cable industry, air conditioning in, 2: 322

Electrical capacity
Conversion factors, 1: 27
Definition, 1: 35

Electrical charge, conversion factors, 1: 26

Electrical conductivity
Aqueous solutions, 6: 229
Balata, 2: 273
Commercial carbons, 2: 303
Definition, 1: 35
Elements, 1: 103; 6: 109
Fats, vegetable, 2: 211
Films, 4: 475
Flames, 6: 156
Gamma rays, production by, 1: 365; 6: 6
Gases, 6: 51, 110
Glass, 2: 101
Gutta percha, 2: 273
Insulating materials, 2: 304
Magnesia concrete, 2: 128
Magnetic field, effect of, 6: 421, 439
Nitrocellulose plastics, 2: 297
Oils and fats, 2: 211
Phenol resins, 2: 299, 300
Porcelains, 2: 71, 80
Refractory materials, 2: 86
Rubber, 2: 272
Soap solutions, 5: 458
Thermal conductivity, relation to, 5: 218
Weak electrolytes, aqueous solution, 6: 259
Whiteware, 2: 80
X-rays, production by, 6: 6, 119

Electrical current, conversion factors, 1: 27

Electrical inductance, conversion factors, 1: 27

Electrical inductivity, conversion factors, 1: 21

Electrical mass conductivity, conversion factors, 1: 28

Electrical potential, conversion factors, 1: 27

Electrical resistance
B. A. unit, 1: 34
Board of Trade unit, 1: 34
Conversion factors, 1: 27

Electrical units
Fundamental, 1: 30
International, 1: 38

Electrical volume conductivity
Conversion factors, 1: 27, 28

Electricity
Atmospheric, 6: 442
Piezo-, 6: 207
Pyro-, 6: 207
Quantity of, 1: 40
Specific heat, 1: 41
Spray, 1: 359
Thermo-, 6: 213

Electrochemical reactions
Potentials of, 6: 332

Electrode cells, potentials of, 6: 319

Electrodes, 6: 52
See also Carbon.

Electrolytic cells
Constants, solutions for, 6: 230

Electromagnetic induction, definition, 1: 38

Electrometall, 2: 375

Electromotive force
Electrolytic, 6: 312
Magnetization, production by, 6: 439
Oxidation-reduction cells, 6: 333
Photo, 6: 66
Thermo, 6: 213
Magnetic field, effect of, 6: 439

Electron
Definition, 1: 36
Spinning, 6: 346

Electron (alloy), 2: 375, 545, 604
Mechanical properties, 2: 545

Electron emission
Excited by
Beta particles, 6: 62
Electrons, 6: 60-64
Positive ions, 6: 64-65
X-rays, 6: 2-6
Radioactive substances, 1: 365

Electron tubes, 6: 58
Oscillating, 6: 456

Electronic charge, 1: 17
Definition, 1: 36

Electronic energy levels, 5: 417

Electronic mass, 1: 18
Definition, 1: 36

Electronic radiation
Absorption, 6: 61
Excited by
Alpha particles, 1: 365
Beta particles, 6: 62
Electrons, 6: 60-64
Positive ions, 6: 64-65
X-rays, 6: 2-6
Reflected, angular distribution, 6: 62-63
Stopping potential, 6: 61
Transmission, 6: 61

Electronic ratio, 1: 17
Definition, 1: 36

Electronic structure, atoms, 6: 28

Electronics, 1: 47; 6: 2, 51

Electrons, 6: 111
Absorption, 6: 61
Absorption coefficients, 6: 61
Angular distribution, 6: 62
Atoms, distribution in, 6: 28
Elongations of, 1: 50

Electrons.—(Continued)
Energy levels, 5: 417
Gases, ionization of, by, 6: 120
High velocity, 6: 3
Low velocity, 6: 5
Magnetism, relation to, 6: 347
Mean free path, 6: 116
Migrational velocity, 6: 116
Normal orbit, 1: 51
Photoemission, 6: 67
Reflection, 6: 62
Secondary
Beta particles, production by, 6: 62
Emission of, 6: 60
Reflection of, 6: 62
Velocity of, 6: 64
Spinning, 6: 346
Stopping potential, 6: 61
Thermal emission, 6: 53
Gases, effect of, 6: 55
Thermal velocity, 6: 116
Transitions in emission of X-rays, 6: 28
Transmission, 6: 61-62
Transmitted, velocity of, 6: 61

Electroplate (alloy), 2: 375, 475, 480, 601, 606

Electrose
Dielectric strength, 2: 310
Electrical resistivity, 2: 310

Electrostatic induction, definition, 1: 38

Electrostatic transmitter, 6: 455

Electrostriction, 6: 207

Electrum (alloy), 2: 375; cf. 475, 480, 586

Elements. *See* Names of individual elements.

Elephant bronze, 2: 375; cf. 464, 560, 600

Elanite (alloy), 2: 376

Elinvar (alloy), 2: 376, 512

Elongation, definition, 1: 36; 2: viii

Elpidite
Density, 1: 152
Refractive index, 1: 152, 170; 7: 26

Emerald
Dielectric constant, 6: 99
Thermal conductivity, 5: 231

Emery
Density, 2: 87
Hardness, 2: 87
Thermal conductivity, 2: 315

Emetamine, optical rotatory power, 7: 477

Emission, spectral, 5: 248, 256, 264, 268

Emission spectra, 5: 277

Emissivity, definition, 1: 36; 5: 242

Emperor brass, 2: 376

Empire cloth, moisture content at various humidities, 2: 323

Emplectite, density, 1: 123

Emulsin, 7: 155

Enamels
Dielectric strength, 2: 310
Electrical conductivity, 2: 310
Vitreous
Acid resistance, 2: 117
Composition, 2: 114
Density, 2: 115
Heat transfer by, 2: 115
Opacifiers, 2: 116
Reflectivity, 2: 116
Strength properties, 2: 115
Thermal expansion, 2: 115, 116
See also Glass.

Enargite, density, 1: 123

Enderle's theory (birefringence), 7: 109

Endurance limit, definition, 2: xii

Energy, conversion factors, 1: 24

Energy levels
Electronic, 5: 417
X-rays, 6: 25

English alloy, 2: 376

English brass, 2: 376; cf. 469, 555, 601

English nickel silver, 2: 376; cf. 469, 555, 601
 English phosphor bronze, 2: 376; cf. 562
 English speculum, 2: 376; cf. 561
 Engraver's brass, 2: 376; cf. 469
Enstatite
 Compressibility, 3: 50
 Density, 1: 142
 Refractive index, 1: 142, 172
 See also Magnesium metasilicate.
Entropy, 5: 84; 7: 224
Eosin
 Absorption spectra, 5: 353; 7: 191
 Photoluminescence, 5: 387
 Sodium salt, diffusion in ethyl alcohol, 5: 73
Eosphorite
 Density, 1: 137
 Refractive index, 1: 137, 172
Eötvös formula (surface tension), 4: 434
Ephedrine, optical rotatory power, 7: 380
Epicamphor, optical rotatory power, 7: 435
Epichlorohydrin
 Azeotropic mixtures, 3: 319–320
 Birefringence, electric, 7: 110
 Boiling point, 3: 217
 Density, 3: 28
 Dielectric constant, 6: 85
 Electrical conductivity, 6: 143
 Refractive index, 7: 35
 Solubility in water, 3: 387
 Surface tension, 4: 449
 Viscosity, 7: 214
 *-Acetic acid**
 *-Benzene**
 -Tetraethylammonium iodide
 Density, 3: 162
Epididymite
 Density, 1: 153
 Refractive index, 1: 153, 170; 7: 27
Epidote
 Magnetic susceptibility, 6: 364
 Refractive index, 7: 25
 Thermal conductivity, 5: 231
 Thermal expansion, 3: 45
Epistilbite
 Density, 1: 145
 Refractive index, 1: 145, 169
Epsomite
 Density, 1: 141
 Refractive index, 1: 141, 168; 7: 23
Equator, definition, 1: 36
Equinox, definition, 1: 35
Erbium
 Cathodoluminescence, 5: 388, 390
 Emission, spectral, 5: 242
 Emission spectra, 5: 292
 Magnetic susceptibility, 6: 355
 Persistent lines, 5: 323
 X-ray absorption limits, 6: 40
 X-ray emission spectra, 6: 40
 X-ray series, limiting frequencies, 6: 35
Erbium chloride
 Absorption spectra, solutions, 5: 329
 Magnetic susceptibility, 6: 359
 Aqueous solution, 6: 364
Erbium ethyl sulfate
 Density, 1: 140
 Refractive index, 1: 140, 166
Erbium nitrate, birefringence, magnetic, aqueous solution, 7: 112
Erbium oxalate
 Dehydration behavior of hydrate, 7: 291
 Magnetic susceptibility, 6: 359
 -Sulfuric acid
 Freezing point-solubility in water, 4: 335; 7: 339
Erbium oxide
 Magnetic susceptibility, 6: 359
 Specific heat, 5: 98

Erbium sulfate
 Decomposition pressure, 7: 290
 Electrical conductivity, aqueous solution, 6: 236
 Magnetic susceptibility, 6: 359
 Solubility in water, 4: 227
 -Sulfuric acid
 Freezing point-solubility in water, 4: 348; 7: 339
Erepsin, 7: 156
Erg, definition, 1: 36
Ergosterol, optical rotatory power, 7: 463
Ergotinine, optical rotatory power, 7: 478
Ericksen value, definition, 2: x
Erinite
 Density, 1: 123
 Refractive index, 1: 123, 173
Eriodictyonone
 Optical rotatory power, 7: 465
Erionite
 Density, 1: 159
 Refractive index, 1: 159, 168
Eritrea, weights and measures, 1: 6
Erucic acid
 Absorption spectra, 5: 355
 Cryoscopic constant, 4: 184
 Esterification constant, 7: 138
 Heat of combustion, 5: 166
 Melting point under pressure, 4: 10
 *-Acetone**
 *-Behenic acid**
 *-Benzene**
 *-Brassicidic acid**
 *-Carbon tetrachloride**
 -Ethyl acetate
 Heat of solution, 5: 153
 -Ethyl alcohol
 Heat of solution, 5: 153
 -Isoerucic acid
 Freezing point-solubility, 4: 167
Erythrite
 Density, 1: 131
 Refractive index, 1: 131, 172
Erythritol
 Crystallization velocity, 5: 61
 Crystallography, 1: 325
 Density, aqueous solution, 3: 114
 Freezing point lowering of aqueous solution, 4: 262
 Heat of combustion, 5: 164
 Heat of solution in water, 5: 149
 Melting point under pressure, 4: 10
 Optical rotatory power, 7: 380
 Refractive index, aqueous solution, 7: 68
 Solubility in water, 4: 251
 Specific heat, 5: 102
 Thermal conductivity, 5: 231
 Verdet constant, 6: 428
Erythrose, optical rotatory power 7: 380
Erythrosine
 Absorption spectra, 5: 353
 Photoluminescence, 5: 387
Esculin
 Chemiluminescence, 5: 386
 Photoluminescence, 5: 387
Eseroline, optical rotatory power, 7: 475
Esop and Wöhler test (explosives), 7: 409
Essexite
 Compressibility, 2: 48; 3: 51
 Elasticity, 2: 52
Esterification, kinetics of, 7: 137
Esters
 Alcoholysis, 7: 136
 Aliphatic, X-ray diffraction data, 1: 348
 Saponification, kinetics of, 7: 128–135
 Saponification by lipase, 7: 153
Esthonia, weights and measures, 1: 6
Ethane
 Absorption spectra, 5: 331
 Boiling point, 3: 217, 231
 Critical point data, 3: 231, 248

Ethane.—(Continued)
 Critical potentials, 6: 72
 Decomposition pressure of hydrate, 245
 Density
 Gas, 3: 3
 Liquid, 3: 28
 Detonation, 2: 185
 Dielectric constant, 6: 82
 Electrical ignition, 2: 175
 Electrons, attachment of, to form ions 6: 117
 Explosion in closed vessels, 2: 191
 Turbulence, effect of, 2: 195
 Flame propagation in, 2: 184
 Heat of combustion, 5: 163
 Heat of formation, 5: 181
 Ignition temperature, 2: 174
 Heat of vaporization, 5: 137
 Inflammability, limits of, 2: 179
 Ionization by α -particles, 6: 122
 Orthobaric density, 3: 230
 Ions, mobility of, in, 6: 111
 Polarization of light scattered by, 5: 265
 Refractivity, 7: 10
 Solubility in non-aqueous liquids, 3: 269
 Solubility in water, 3: 261
 Sound, velocity of, in, 6: 463
 Thermal conductivity, 5: 214, 215
 Specific heat, gas, 5: 80
 Vapor pressure, 3: 217
 Aqueous solution, 3: 363
 Vapor pressure above 1 atm., 3: 230
 Verdet constant, 6: 425
 Viscosity, gas, 5: 3
 *-Acetylene**
 *-Amyl alcohol**
 *-Butyl alcohol**
 *-Carbon dioxide**
 -Ethyl alcohol
 Vapor pressure, 3: 360
 -Hydrogen
 Detonation, 2: 186
 Diffusion coefficient, 5: 62
 -Hydrogen chloride
 Freezing point-solubility, 4: 212
 P-V-T relations, 3: 17
 Vapor pressure, 3: 353
 -Methane
 Boiling point elevation, 3: 333
 -Methyl alcohol
 Vapor pressure, 3: 360
 -Naphthalene
 Vapor pressure, 3: 360
 -Nitrous oxide
 Vapor pressure, 3: 356, 381
 -Oxygen
 Boiling point elevation, 3: 325
 -Propyl alcohol
 Vapor pressure, 3: 360
 -Sulfur dioxide
 Vapor pressure, 3: 354, 381
Ether formation, kinetics of, 7: 143
Ethiopia, weights and measures, 1: 6
Ethoxyacetic acid, electrical conductivity, aqueous solution, 6: 267
Ethoxybenzoic acids, electrical conductivity, aqueous solution, 6: 291
Ethoxydichlorophosphine
 Surface tension, 4: 449
Ethoxynaphthalene (α -, β -)
 Refractive index, 7: 56
Ethoxypropionic acid
 Electrical conductivity, aqueous solution, 6: 270
 Optical rotatory power, 7: 366
Ethoxytoluenes, refractive index, 7: 47
Ethyl acetate
 Absorption spectra, 5: 332, 337
 Azeotropic mixtures, 3: 318–323
 Birefringence, electric, 7: 111

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ethyl acetate.—(Continued)

- Boiling point, **3**: 219, 340
- Compressibility, **3**: 36, 39
- Condensation on ions and nuclei, **6**: 117
- Critical point data, **3**: 241, 248
- Cryoscopic constant, **4**: 215
- Density, **3**: 28, 33
 - Aqueous solution, **3**: 114
- Dielectric constant, **6**: 87
- Diffusion in methyl alcohol, **5**: 72
- Diffusion of vapor in gases, **5**: 62
- Electrical conductivity, **6**: 143
- Flash point, **2**: 162
- Freezing point lowering of aqueous solution, **4**: 262
- Heat of combustion, **5**: 167
- Heat of solution in water, **5**: 149
- Heat of vaporization, **5**: 137
- Heat of wetting by, **5**: 142
- Inflammability, limits of, **2**: 180
- Ions, mobility of, in, **6**: 112
- Magnetic susceptibility, **6**: 361
- Melting point, **1**: 54
- Orthobaric density, **3**: 241
- Polarization of light scattered by
 - Gas, **5**: 266
 - Liquid, **5**: 266
- Refractive index
 - Gas, **7**: 10
 - Liquid, **7**: 36, 77, 83
- Saponification, kinetics of, **7**: 129
- Solidification point, **1**: 61
- Solubility in water, **3**: 388
- Solubility of salts in, **4**: 209
- Sound, velocity of, in vapor, **6**: 463
- Specific heat
 - Gas, **5**: 81
 - Liquid, **5**: 108
- Surface tension, **4**: 451
 - Aqueous solution, **4**: 468
- Thermal conductivity
 - Gas, **5**: 214, 215
 - Liquid, **5**: 228
- Vapor pressure, **3**: 219
 - Aqueous solution, **3**: 364
- Vapor pressure above 1 atm., **3**: 241
- Verdet constant, **6**: 428
- Viscosity
 - Gas, **5**: 3
 - Liquid, **5**: 28; **7**: 215, 223
- X-ray diffraction bands, **1**: 352
- X-rays, absorption coefficient, **6**: 14, 16
- Acenaphthene*
- Acetic acid*
- Acetone*
- Ammonium perchlorate*
- Amyl acetate*
- Amyl formate*
- Aniline*
- Anthracene*
- Antimony trichloride*
- Azobenzene*
- Barium perchlorate*
- Benzene*
- Benzene*-Camphor
- Benzil*
- Benzoic acid*
- Benzyl benzoate*
- Bismuth chloride*
- Borneol*
- Bromine*
- d-Bromocamphor*
- Cadmium iodide*
- Calcium perchlorate*
- Camphor*
- Carbon disulfide*
- Carbon tetrachloride*
- Chlorine*
- Chloroform*
- Citric acid*
- m-Cresol*

Ethyl acetate.—(Continued)

- Cupric chloride*
- Cyclohexane*
- p-Dibromobenzene*
- Diethyl malate*
- Diethyl succinate*
- Diethyl tartrate*
- Dimethyl acetylmaleate*
- Dimethyl malate*
- Dimethyl tartrate*
- Dimethylaniline*
- m-Dinitrobenzene*
- Diphenyl*
- Durene*
- Erucic acid*
- Ethyl alcohol
 - Density, **3**: 159
 - Aqueous solution, **3**: 126
 - Heat of solution, **5**: 152, 156
 - Miscibility in water, **3**: 412
 - Viscosity, **5**: 37
- Ethyl benzoate
 - Density, **3**: 166
 - Heat of solution, **5**: 157
 - Specific heat, **5**: 127
 - Surface tension, **4**: 473
 - Viscosity, **5**: 40
- Ethyl chloroacetate
 - Density, **3**: 165
- Ethyl ether
 - Heat of solution, **5**: 156, 158
 - Vapor pressure, **3**: 289
- Ethyl formate
 - Density, **3**: 164
- Ethyl iodide
 - Density, **3**: 158
 - Refractive index, **7**: 81
 - Dispersion, **7**: 103
 - Surface tension, **4**: 472
 - Vapor pressure, **3**: 288
 - Viscosity, **5**: 37
- Ethyl propionate
 - Density, **3**: 166
- Ethyl trichloroacetate
 - Density, **3**: 165
 - Heat of solution, **5**: 156
 - Specific heat, **5**: 127
 - Surface tension, **4**: 472
 - Viscosity, **5**: 40
- Ethylbenzene
 - Density, **3**: 166
- Gallic acid
 - Density, **3**: 166
- Heptane
 - Heat of solution, **5**: 153
- Hexahydrocresols
 - Vapor pressure, **3**: 289
- Hexahydrophenol
 - Vapor pressure, **3**: 289
- Hexane
 - Density, **3**: 166
- Hydrogen bromide
 - Freezing point-solubility, **4**: 186
- Hydrogen peroxide
 - Distribution coefficients in water, **3**: 419
- m-Hydroxybenzoic acid
 - Heat of solution, **5**: 153
- Iodine
 - Boiling point elevation, **3**: 340
 - Density, **3**: 132
- Iodine-Potassium iodide
 - Freezing point-solubility, **4**: 268
- Isoamyl acetate
 - Density, **3**: 166
 - Specific heat, **5**: 127
 - Viscosity, **5**: 40
- Isoamyl alcohol
 - Heat of solution, **5**: 156
 - Surface tension, **4**: 472

Ethyl acetate.—(Continued)

- Isoamyl ether
 - Density, **3**: 167
 - Surface tension, **4**: 473
 - Viscosity, **5**: 41
- Isoamyl formate
 - Specific heat, **5**: 127
- Isobutyl alcohol
 - Heat of solution, **5**: 153, 156
- Isobutyl formate
 - Density, **3**: 166
- Lauric acid
 - Heat of solution, **5**: 153
- Lithium perchlorate
 - Density, **3**: 141
- Magnesium iodide
 - Freezing point-solubility, **4**: 204
- Magnesium perchlorate
 - Density, **3**: 140
- Menthol
 - Boiling point elevation, **3**: 341
- Mercuric bromide
 - Boiling point elevation, **3**: 341
 - Density, **3**: 139
 - Aqueous solution, **3**: 102
- Mercuric chloride
 - Boiling point elevation, **3**: 341
 - Density, **3**: 139
 - Aqueous solution, **3**: 102
 - Freezing point-solubility, **4**: 213
- Mercuric cyanide
 - Density, **3**: 139
 - Aqueous solution, **3**: 102
- Mercuric iodide
 - Boiling point elevation, **3**: 341
 - Density, **3**: 139
 - Aqueous solution, **3**: 102
- Methyl acetate
 - Density, **3**: 164
 - Heat of solution, **5**: 156, 158
 - Specific heat, **5**: 127
 - Surface tension, **4**: 472
 - Vapor pressure, **3**: 288
 - Viscosity, **5**: 40
- Methyl alcohol
 - Heat of solution, **5**: 151
 - Miscibility in water, **3**: 410
- Methyl benzoate
 - Density, **3**: 166
- Methyl formate
 - Density, **3**: 157
- Methyl iodide
 - Density, **3**: 149
- Naphthalene
 - Boiling point elevation, **3**: 341
 - Density, **3**: 167
 - Freezing point-solubility, **4**: 174
 - Heat of solution, **5**: 153
- Nitrobenzene
 - Density, **3**: 166
 - Surface tension, **4**: 472
 - Vapor pressure, **3**: 289
 - Viscosity, **5**: 40
- o-Nitrobenzoic acid
 - Heat of formation, **5**: 153
- Nitrocellulose
 - Density, **3**: 196
- Palmitic acid
 - Density, **3**: 167
- Paraldehyde
 - Density, **3**: 166
- Pentachloroethane
 - Vapor pressure, **3**: 287
- Phenanthraquinone
 - Density, **3**: 167
- Phenanthrene
 - Density, **3**: 167
 - Freezing point-solubility, **4**: 174
- Potassium perchlorate
 - Density, **3**: 142

Ethyl acetate.—(Continued)

- Propyl alcohol*
Heat of solution, **5**: 153, 156
- Propyl formate*
Density, **3**: 166
- Propyl propionate*
Vapor pressure, partial, **3**: 289
- Pyridine*
Density, **3**: 166
Heat of solution, **5**: 153
Viscosity, **5**: 40
- Pyridine acetate*
Heat of solution, **5**: 153
- Resorcinol*
Density, **3**: 166
Heat of solution, **5**: 153
- Rubidium perchlorate*
Density, **3**: 142
- Salicylic acid*
Freezing point-solubility, **4**: 115
Heat of solution, **5**: 153
- Sodium chlorate*
Density, **3**: 141
- Stannic chloride*
Density, **3**: 137
Viscosity, **5**: 28
- Stannous chloride*
Density, **3**: 137
- Stearic acid*
Density, **3**: 167
- Strontium perchlorate*
Density, **3**: 140
- Tetrahydronaphthalene*
Vapor pressure, **3**: 289
- Tetrapropylammonium iodide*
Density, **3**: 167
- Thymol*
Freezing point-solubility **4**: 115
- Toluene*
Density, **3**: 166
Viscosity, **5**: 40
- Trichloroacetic acid*
Density, **3**: 153
Freezing point-solubility, **4**: 101
Viscosity, **5**: 35
- Triphenylmethane*
Density, **3**: 167

Ethyl acetoacetate

- Absorption spectra, **5**: 332, 340, 368, 371
- Azeotropic mixtures, **3**: 322
- Birefringence, electric, **7**: 111
- Density, **3**: 29, 33
Aqueous solution, **3**: 114
- Dielectric constant, **6**: 91
- Electrical conductivity, **6**: 144
Aqueous solution, **6**: 275
- Heat of combustion, **5**: 167
- Heat of solution in water, **5**: 150
- Magnetic susceptibility, **6**: 362
- Refractive index, **7**: 39
- Saponification, kinetics of, **7**: 131
- Solubility in water, **3**: 390
- Specific heat, **5**: 110
- Surface tension, **4**: 454
- Tautomerism, kinetics of, **7**: 119
- Verdet constant, **6**: 429
- Viscosity, **5**: 38, 46; **7**: 217
- Azobenzene**
- Benzene**
- Carbon disulfide**
- Diethyl tartrate**
- Ethyl alcohol*
Density, **3**: 160
Viscosity, **5**: 38
- Ethyl chloroacetate*
Density, **3**: 165
- Ethylene bromide*
Density, **3**: 155
- Hexane*
Density, **3**: 185

Ethyl acetoacetate.—(Continued)

- 2, 6-Lutidine*
Density, **3**: 185
Viscosity, **5**: 49
- Methyl formate*
Density, **3**: 157
- Naphthalene*
Density, **3**: 185
- Palmitic acid*
Density, **3**: 185
- Phenanthrene*
Density, **3**: 185
- Pyridine*
Density, **3**: 170
Viscosity, **5**: 42
- Ethyl acetoneoxalate**
Dielectric absorption, **6**: 92
Dielectric constant, **6**: 92
Specific heat, **5**: 110
- Ethyl acetophenoneoxalate**
Dielectric absorption, **6**: 96
Dielectric constant, **6**: 96
- Ethyl 1-acetylcyclopropanecarboxylate**
Viscosity, **7**: 219
- Ethyl alcohol**
Absorption, index of, **6**: 97
Absorption spectra, **5**: 331, 335
Angle of contact, **4**: 434
Azeotropic mixtures, **3**: 318–320, 322–323
Birefringence, electric, **7**: 110
Aqueous solution, **7**: 112
Boiling point, **3**: 217, 336
Aqueous solution, **3**: 290, 310
Compressibility, **3**: 41
Aqueous solution, **3**: 440
Condensation on ions and nuclei, **6**: 117
Critical point data, **3**: 238, 248
Density
Aqueous solution, **3**: 112, 116; **7**: 67
Gas, **3**: 437
Liquid, **3**: 27
Dielectric absorption, **6**: 85, 97
Dielectric constant, **6**: 82, 85, 105
Aqueous solution, **6**: 101
Dielectric dispersion, **6**: 97
Diffusion in water, **5**: 70
Diffusion of vapor in gases, **5**: 62
Electrical conductivity, **6**: 143
Aqueous solution, **6**: 263
Electrical ignition, **2**: 175
Emission, spectral, **5**: 257, 258
Fats, miscibility of, in water, **3**: 401
Flash point, **2**: 161
Free energy, **7**: 245
Freezing mixtures, use in, **1**: 65
Freezing point lowering of aqueous solution, **4**: 262
Heat of adiabatic expansion, **5**: 147
Heat of adsorption on charcoal, **5**: 140
Heat of combustion, **5**: 164
Heat of compression, **5**: 147
Heat of dilution with water, **5**: 160, 162
Heat of formation, **5**: 181
Heat of fusion, **5**: 132
Heat of solution in water, **5**: 148, 154, 159
Heat of vaporization, **3**: 336; **5**: 137, 138
Heat of wetting by, **5**: 142
Ignition temperature, **2**: 174
Inflammability, limits of, **2**: 180
Interfacial tension, **4**: 474
Ionization of vapor by α -particles, **6**: 122
Ions, mobility of, in, **6**: 112, 114
Magnetic rotatory power, **6**: 428
Aqueous solution, **6**: 431
Magnetic susceptibility, **6**: 361
Orthobaric density, **3**: 238
Photochemical hydrolysis, **7**: 163
Photochemical oxidation, **7**: 162
Polarization of light reflected from, **5**: 261

Ethyl alcohol.—(Continued)

- Polarization of light scattered by
Gas, **5**: 265
Liquid, **5**: 266
- Pressure-volume relations for gas, **3**: 437
- Refractive index
Aqueous solution, **7**: 67, 92
Dispersion, **7**: 100
Gas, **7**: 10
Liquid, **6**: 97; **7**: 12, 34, 78, 79
- Rubber, permeability of, to vapor, **5**: 77
- Solidification point, **1**: 61
- Solubility in water, **4**: 251
- Solubility of salts in, **4**: 207
- Sound, velocity of
Aqueous solution, **6**: 464
Gas, **6**: 463
Liquid, **6**: 464
- Specific heat
Aqueous solution, **5**: 116
Gas, **5**: 80, 81
Liquid, **5**: 102, 107, 114
Solid, **5**: 102
- Spectral filter, use as, **5**: 273
- Surface tension, **4**: 449
Aqueous solution, **4**: 467
Pressure, effect of, **4**: 475
- Thermal conductivity
Aqueous solution, **5**: 227
Gas, **5**: 214, 215
Liquid, **5**: 218, 227, 228
Pressure, effect of, **5**: 227
- Vapor pressure, **3**: 217
Aqueous solution, **3**: 290
- Vapor pressure above 1 atm., **3**: 238
- Verdet constant, **6**: 426, 427
Dispersion, **6**: 434
- Viscosity
Aqueous solution, **5**: 22
Gas, **5**: 3
Liquid, **5**: 11, 26; **7**: 214
- X-ray diffraction bands, **1**: 352
- Acenaphthene**
- Acetal**
- Acetaldehyde**
- Acetamide**
- Acetamide**-*Phenol*
- Acetanilide**
- Acetic acid**
- Acetic acid**-*Turpentine*
- *α -Acetonaphthalide**
- Acetone**
- Acetone**-*Benzophenone*
- Acetone**-*Calcium nitrate*
- Acetone**-*Cupric nitrate*
- Acetone**-*Lithium bromide*
- Acetone**-*Potassium thiocyanate*
- Acetone**-*Silver nitrate*
- Acetonitrile**
- Acetophenone oxime**
- p-Acetotoluide**
- 2, 4-Acetylchlorotoluidine**
- 2, 5-Acetylchlorotoluidine**
- Aconitine**
- Air**
- Alanine**
- Allyl alcohol**
- Allyl isothiocyanate**
- Aminobenzoic acid* (o-, m-, p-)*
- Ammonia**
- Ammonium benzoate**
- Ammonium bromide**
- Ammonium bromide**-*Glycerol*
- Ammonium bromide**-*Methyl alcohol*
- Ammonium bromide**-*Propyl alcohol*
- Ammonium carbonate**
- Ammonium chloride**
- Ammonium chloride**-*Methyl alcohol*
- Ammonium chloride**-*Propyl alcohol*
- Ammonium chromate**
- Ammonium dichromate**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ethyl alcohol.—(Continued)

-Ammonium gallium sulfate*
 -Ammonium gallium sulfate*-Sulfuric acid
 -Ammonium iodide*
 -Ammonium nitrate*
 -Ammonium nitrate*-Methyl alcohol
 -Ammonium nitrate*-Silver nitrate
 -Ammonium oleate*
 -Ammonium palmitate*
 -Ammonium perchlorate*
 -Ammonium salicylate*
 -Ammonium stearate*
 -Ammonium sulfate*
 -Ammonium sulfate*-Lithium sulfate
 -Ammonium thiocyanate*
 -Amyl alcohol*
 -Amyl alcohol*-Sodium chloride
 -Amyl benzoate*-Water
 -Amylene*
 -Anethole*
 -Aniline*
 -Aniline benzenesulfonate*
 -Aniline hydrochloride*
 -Anisole*
 -Anthracene*
 -Anthraquinone*
 -Azobenzene*
 -Barium acetate*
 -Barium bromide*
 -Barium butyrate*
 -Barium chloride*
 -Barium chromate*
 -Barium dinitrosalicylate*
 -Barium dithionate*
 -Barium iodide*
 -Barium nitrate*
 -Barium perchlorate*
 -Barium picrate*
 -Barium propionate*
 -Benzaldehyde*
 -Benzamide*
 -Benzanilide*
 -Benzene*
 -Benzene*-Carbon tetrachloride
 -Benzil*
 -Benzoic acid*
 -Benzoic acid*-Water
 -Benzophenone*
 -Benzoylcinchonine*
 -Benzoylcinchotoxine*
 -2-Benzoylcyclohexanone*
 -2-Benzoylcyclopentanone*
 -Benzoylphenylhydrazine*
 -Benzyl acetate*
 -Benzyl alcohol*
 -Benzyl alcohol*-Water
 -Benzyl ethyl ether*
 -Bismuth salicylate*
 -Boric acid*
 -Borneol*
 -Bromine*
 -Bromoacetic acid*
 -Bromoallocinnamic acid (α -, β -)*
 -p-Bromoaniline*
 -Bromobenzene*
 -d-Bromocamphor*
 -Bromocinnamic acid (α -, β -)*
 -Bromoform*
 -Bromonaphthalene*
 -Bromosuccinic acid*
 -Bromotoluene*
 -Butane*
 -Butyl acetate*
 -Butyl alcohol*
 -Butyl formate*
 -Butyramide*
 -Butyric acid*
 -Cadmium bromide*
 -Cadmium chloride*
 -Cadmium iodide*

Ethyl alcohol.—(Continued)

-Calcium bromide*
 -Calcium chloride*
 -Calcium chloride*-Cobaltous chloride
 -Calcium dithionate*
 -Calcium nitrate*
 -Calcium nitrate*-Formamide
 -Calcium oxalate*
 -Calcium perchlorate*
 -Camphor*
 -Camphoric acid*
 -Caproamide*
 -Carbazole*
 -Carbon disulfide*
 -Carbon disulfide*-Iodine
 -Carbon tetrachloride*
 -Carminic acid*
 -Cerous chloride*
 -Cesium chloride*
 -Cesium gallium sulfate*
 -Cesium gallium sulfate*-Sulfuric acid
 -Cesium nitrate*
 -Cesium perchlorate*
 -Chloral*
 -Chloral hydrate*
 -Chlorine*
 -Chloroacetamide*
 -p-Chloroacetanilide*
 -Chloroacetic acid*
 - α -Chloroallocinnamic acid*
 -p-Chloroaniline*
 -Chlorobenzene*
 - α -Chlorocinnamic acid*
 -Chloroform*
 -Chloroform*-Iodine
 -Chlorophenol*
 -Chlorophenol (o-, m-, p-)*
 -Chlorosuccinic acid*
 -1-Chlorotetrahydronaphthalene*
 -Chromic chloride*
 -Cinchonine*
 -Cinchotoxine*
 -Cinnamaldehyde*
 -Cinnamic acid*
 -Citric acid*
 -Cobaltous chloride*
 -Cobaltous chloride*-Glycerol
 -Cobaltous chloride*-Mercuric chloride
 -Cobaltous thiocyanate*
 -Cottonseed oil*
 -Cresol*
 -o-Cresol*
 -Cupric chloride*
 -Cupric chloride*-Potassium chloride
 -Cupric chloride*-Toluene
 -Cuprous bromide*
 -Cuprous chloride*
 -Cyanobenzene*
 -Cyclohexan-1, 4-dione*
 -Cyclohexane*
 -Cyclohexanone*
 -Dibenzylpiperazine*
 -p-Dibromobenzene*
 -Dibromocinnamic acid*
 -Dichloroacetamide*
 -1, 1-Dichloroethane*
 -Di-(2-chloroethyl) sulfide*
 -Dicyanodiamide*
 -Diethyl ketone*
 -Diethyl malonate*
 -Diethyl tartrate*
 -Diethylammonium chloride*
 -o-Dimethoxybenzene*
 -Dimethylamine chloroplatinate*
 -Dimethylaniline*
 -m-Dinitrobenzene*
 -Diphenyl*
 -Diphenylamine*
 -Diphenylamine*-Ethyl ether
 -Diphenylurea*

Ethyl alcohol.—(Continued)

-Erucic acid*
 -Ethane*
 -Ethyl acetate*
 -Ethyl acetoacetate*
 -Ethyl benzoate
 Boiling point elevation, **3**: 337
 Density, **3**: 161
 -Ethyl benzyl ether
 Density, aqueous solution, **3**: 128
 -Ethyl bromide
 Density, aqueous solution, **3**: 126
 Miscibility in water, **3**: 411
 -Ethyl butyrate
 Density, aqueous solution, **3**: 127
 Miscibility in water, **3**: 413
 -Ethyl chloroacetate
 Miscibility in water, **3**: 410
 -Ethyl dichloroacetate
 Miscibility in water, **3**: 410
 -Ethyl diethylacetoacetate
 Density, **3**: 161
 Viscosity, **5**: 38
 -Ethyl di-p-toluyglycerate
 Density, **3**: 161
 -Ethyl ether
 Boiling point, **3**: 313
 Density, **3**: 159
 Aqueous solution, **3**: 126
 Dielectric constant, **6**: 102
 Distribution coefficients in water, **3**: 401
 Heat of solution, **5**: 152, 156
 Refractive index, aqueous solution, **7**: 92
 Solubility in water, **3**: 405
 Vapor pressure, **3**: 288, 361
 Aqueous solution, **3**: 377, 383
 Viscosity, **5**: 38
 Aqueous solution, **5**: 24
 -Ethyl ether-Iodine
 Freezing point-solubility, **4**: 268
 -Ethyl ether-Mercuric chloride
 Solubility relations, **4**: 211
 -Ethyl ethylacetoacetate
 Density, **3**: 160
 Viscosity, **5**: 38
 -Ethyl iodide
 Boiling point, **3**: 313
 -Ethyl isovalerate
 Miscibility in water, **3**: 412
 -Ethyl propionate
 Density, aqueous solution, **3**: 127
 Miscibility in water, **3**: 412
 -Ethyl trichloroacetate
 Miscibility in water, **3**: 410
 -Ethylacetanilide
 Boiling point elevation, **3**: 337
 -Ethylene chloride
 Density, aqueous solution, **3**: 125
 Miscibility in water, **3**: 411
 -Ethylidene chloride
 Miscibility in water, **3**: 411
 -Ethylmercaptan
 Viscosity, **5**: 37
 -Ethylphenylammonium chloride
 Boiling point elevation, **3**: 337
 -N-Ethylquinolinium iodide
 Boiling point elevation, **3**: 337
 -Ferric chloride
 Boiling point elevation, **3**: 337
 Density, **3**: 139
 Magnetic susceptibility, **6**: 364
 Specific heat, **5**: 125
 -Fluorene
 Freezing point-solubility, **4**: 110
 -Formamide
 Density, **3**: 149
 Viscosity, **5**: 31, 33, 51
 -Formamide-Lithium nitrate
 Density, **3**: 143
 Viscosity, **5**: 31

Ethyl alcohol.—(Continued)

- Formamide-Rubidium iodide*
Density, **3**: 143
Viscosity, **5**: 31
- Formamide-Tetraethylammonium iodide*
Density, **3**: 197
Viscosity, **5**: 51
- Formanilide*
Boiling point elevation, **3**: 337
- Formic acid*
Density, **3**: 148
Aqueous solution, **3**: 125
- Fumaric acid*
Freezing point-solubility, **4**: 110
- Galegine bicarbonate*
Freezing point-solubility in water, **4**: 405
- Galegine nitrate*
Freezing point-solubility in water, **4**: 405
- Galegine sulfate*
Freezing point-solubility in water, **4**: 405
- Gallic acid*
Density, **3**: 160
Aqueous solution, **3**: 127; **4**: 405
Freezing point-solubility in water, **4**: 405
- Glycerol*
Density, **3**: 158
Aqueous solution, **3**: 126
Heat of solution, **5**: 152
Specific heat, aqueous solution, **5**: 129
Surface tension, aqueous solution, **4**: 470
Thermal conductivity, **5**: 227
Vapor pressure, **3**: 360
Vapor pressure lowering, **3**: 300
Viscosity, **5**: 30, 37
Aqueous solution, **5**: 24
- Glycerol-Lithium bromide*
Viscosity, **5**: 31
- Glycerol-Potassium iodide*
Viscosity, **5**: 31
- Glycerol-Water*
Vapor pressure, partial, **3**: 291
- Glycolamide*
Boiling point elevation, **3**: 336
- Glycolanilide*
Boiling point elevation, **3**: 337
- Guaiacol*
Viscosity, **5**: 38
- Heptane*
Density, aqueous solution, **3**: 128
Heat of solution, **5**: 152
Miscibility in water, **3**: 411
- Hexane*
Density, aqueous solution, **3**: 127
Miscibility in water, **3**: 411
- Hydrogen bromide*
Density, **3**: 135
Freezing point-solubility, **4**: 186
Viscosity, **5**: 26
Aqueous solution, **5**: 24
- Hydrogen chloride*
Density, **3**: 135
Aqueous solution, **3**: 101
Viscosity, **5**: 26
Aqueous solution, **5**: 24
- Hydroquinol*
Specific heat, **5**: 126
Viscosity, **5**: 38
- m-Hydroxybenzoic acid*
Freezing point-solubility, **4**: 110
Heat of solution, **5**: 152
- p-Hydroxybenzoic acid*
Freezing point-solubility, **4**: 110
- o-Hydroxybenzyl alcohol*
Viscosity, **5**: 38
- Hydroxylamine hydrochloride*
Boiling point elevation, **3**: 336

Ethyl alcohol.—(Continued)

- Iodine*
Boiling point elevation, **3**: 336
Density, **3**: 132
Viscosity, **5**: 26
- Iodine-Potassium iodide*
Density, aqueous solution, **3**: 103
Freezing point-solubility, **4**: 268
Freezing point-solubility in water, **4**: 424
- Isoamyl acetate*
Miscibility in water, **3**: 412
- Isoamyl alcohol*
Density, **3**: 159
Aqueous solution, **3**: 127
Heat of solution, **5**: 156
Solubility in water, **3**: 405
Viscosity, **5**: 38
- Isoamyl bromide*
Density, aqueous solution, **3**: 127
Miscibility in water, **3**: 411
- Isoamyl ether*
Density, aqueous solution, **3**: 128
Miscibility in water, **3**: 411
- Isoamyl formate*
Miscibility in water, **3**: 412
- Isobutyl alcohol*
Density, **3**: 159
Aqueous solution, **3**: 126
Heat of solution, **5**: 156
Miscibility in water, **3**: 412
Refractive index, **7**: 81
- Isobutyl bromide*
Density, aqueous solution, **3**: 126
Miscibility in water, **3**: 411
- Isobutylacetamide*
Boiling point elevation, **3**: 336
- Isobutylammonium chloride*
Boiling point elevation, **3**: 336
- Isobutyramide*
Boiling point elevation, **3**: 336
- Isopentane*
Solubility, mutual, **3**: 395
- Isopropyl alcohol*
Refractive index, **7**: 81
- Isovaleramide*
Boiling point elevation, **3**: 336
- Lactamide*
Boiling point elevation, **3**: 336
- Lactanilide*
Boiling point elevation, **3**: 337
- Lanthanum chloride*
Boiling point elevation, **3**: 337
- Lauric acid*
Heat of fusion, **5**: 153
- Lead acetate*
Density, **3**: 138
Aqueous solution, **3**: 101; **4**: 406
Freezing point-solubility in water, **4**: 406
- Lead chloride*
Freezing point-solubility in water, **4**: 406; **7**: 315
- Lithium benzoate*
Density, **3**: 141
Aqueous solution, **3**: 102; **4**: 408
Freezing point-solubility in water, **4**: 408
- Lithium bromide*
Boiling point elevation, **3**: 337
Freezing point-solubility, **4**: 205
Viscosity, aqueous solution, **5**: 24
- Lithium chloride*
Boiling point elevation, **3**: 337
Density, **3**: 140
Freezing point-solubility, **4**: 205
Freezing point-solubility in water, **4**: 408
Vapor pressure lowering, **3**: 300
Viscosity, **5**: 29

Ethyl alcohol.—(Continued)

- Lithium citrate*
Density, **3**: 141
Aqueous solution, **3**: 102; **4**: 408
Freezing point-solubility in water, **4**: 408
- Lithium iodide*
Boiling point elevation, **3**: 338
- Lithium nitrate*
Boiling point elevation, **3**: 338
- Lithium perchlorate*
Density, **3**: 141
- Lithium salicylate*
Density, **3**: 141
Aqueous solution, **3**: 102; **4**: 408
Freezing point-solubility in water, **4**: 408
- Lithium sulfoantimonate*
Freezing point-solubility in water, **4**: 408
- 2,6-Lutidine*
Density, **3**: 160
- Magnesium bromide*
Freezing point-solubility, **4**: 203
- Magnesium chloride*
Boiling point elevation, **3**: 337
Density, **3**: 140
- Magnesium iodide*
Freezing point-solubility, **4**: 204
- Magnesium perchlorate*
Density, **3**: 140
- Maleic acid*
Freezing point-solubility, **4**: 110
- Malic acid*
Density, **3**: 159
- Malonamide*
Boiling point elevation, **3**: 336
- Manganous chloride*
Magnetic susceptibility, **6**: 364
Specific heat, **5**: 125
- Manganous nitrate*
Magnetic susceptibility, **6**: 364
- Manganous sulfate*
Freezing point-solubility in water, **4**: 407
- Menthol*
Density, **3**: 161
Heat of solution, **5**: 152
- Menthyl benzenesulfonate*
Density, **3**: 161
- l-Menthyl diacetyltartrate*
Density, **3**: 161
- Menthyl naphthalene- β -sulfonate*
Density, **3**: 161
- l-Menthyl tartrate*
Density, **3**: 161
- Mercuric bromide*
Density, **3**: 139
Aqueous solution, **3**: 102
- Mercuric bromide-Methyl alcohol*
Density, **3**: 143
- Mercuric bromide-Propyl alcohol*
Density, **3**: 143
- Mercuric chloride*
Boiling point elevation, **3**: 337
Density, **3**: 139
Aqueous solution, **3**: 102
Freezing point-solubility, **4**: 198
Specific heat, **5**: 125
Verdet constant, **6**: 427
- Mercuric chloride-Methyl alcohol*
Density, **3**: 143
- Mercuric chloride-Potassium chloride*
Solubility relations, **4**: 211
- Mercuric chloride-Propyl alcohol*
Density, **3**: 143
- Mercuric chloride-Sodium chloride*
Solubility relations, **4**: 211

Ethyl alcohol.—(Continued)

- Mercuric cyanide*
Density, **3**: 139
Aqueous solution, **3**: 102
Verdet constant, **6**: 427
- Mercuric cyanide-Methyl alcohol*
Density, **3**: 143
- Mercuric cyanide-Propyl alcohol*
Density, **3**: 143
- Mercuric iodide*
Boiling point elevation, **3**: 337
Density, **3**: 139
Aqueous solution, **3**: 102
Verdet constant, **6**: 427
- Mercuric iodide-Methyl alcohol*
Density, **3**: 143
- Mercuric iodide-Propyl alcohol*
Density, **3**: 143
- Mercuric methyl chloride*
Boiling point elevation, **3**: 338
- Mercuric methyl iodide*
Boiling point elevation, **3**: 338
- Mesitylene*
Density, aqueous solution, **3**: 128
Miscibility in water, **3**: 413
- Methyl acetate*
Density, **3**: 158
Viscosity, **5**: 37
- Methyl alcohol*
Boiling point, **3**: 312
Density, **3**: 150
Heat of solution, **5**: 155, 158
Refractive index, **7**: 79
Specific heat, **5**: 116
Surface tension, **4**: 471
Thermal conductivity, **5**: 227
Vapor pressure, **3**: 287
Viscosity, **5**: 34
Aqueous solution, **5**: 24
- Methyl alcohol-Potassium iodide*
Density, **3**: 143
- Methyl alcohol-Potassium nitrate*
Freezing point-solubility in water, **4**: 425
- Methyl alcohol-Potassium thiocyanate*
Viscosity, **5**: 31
- Methyl alcohol-Sodium bromide*
Density, **3**: 143
- Methyl alcohol-Sodium iodide*
Density, **3**: 143
- Methyl butyrate*
Miscibility in water, **3**: 413
- Methyl di(bromobenzoyl)tartrate(o-, m-, p-)*
Density, **3**: 161
- Methyl di(chlorobenzoyl)tartrate(o-, m-, p-)*
Density, **3**: 161
- Methyl di-p-toluyglycerate*
Density, **3**: 161
- Methyl ethyl ketone*
Miscibility in water, **3**: 409
- Methyl iodide*
Density, **3**: 149
- Methyl isovalerate*
Miscibility in water, **3**: 412
- Methyl pinabietate*
Boiling point elevation, **3**: 337
- Methyl propionate*
Miscibility in water, **3**: 412
- Methyl salicylate*
Density, aqueous solution, **3**: 128
Miscibility in water, **3**: 412
- Methylacetanilide*
Boiling point elevation, **3**: 337
Density, **3**: 161
- Methylaniline*
Density, aqueous solution, **3**: 128
Miscibility in water, **3**: 413
- Methylene iodide*
Solubility, mutual, **3**: 397

Ethyl alcohol.—(Continued)

- N-Methylisoquinolinium iodide*
Boiling point elevation, **3**: 337
- N-Methylphenylacridinium salts*
Boiling point elevation, **3**: 337
- N-Methylquinolinium iodide*
Boiling point elevation, **3**: 337
- Molybdenum chloride*
Boiling point elevation, **3**: 337
- Monoacetin*
Viscosity, **5**: 38
- Naphthalene*
Boiling point elevation, **3**: 337
Density, **3**: 161
Dielectric constant, **6**: 102
Freezing point-solubility, **4**: 110
Freezing point-solubility in water, **4**: 405
Heat of solution, **5**: 152
- α-Naphthylamine*
Freezing point-solubility, **4**: 110
- Neodymium chloride*
Boiling point elevation, **3**: 337
- Nicotine*
Density, **3**: 161
- Nitroaniline (m-, p-)*
Density, **3**: 160
- Nitrobenzene*
Birefringence, magnetic, **7**: 112
Density, **3**: 159
Aqueous solution, **3**: 127
Miscibility in water, **3**: 412
Vapor pressure, **3**: 288
- o-Nitrobenzidine*
Boiling point elevation, **3**: 337
- m-Nitrobenzoic acid*
Heat of solution, **5**: 152
- Nitromethane*
Density, **3**: 150
- o-Nitrophenol*
Density, **3**: 160
Freezing point-solubility, **4**: 110
- m-Nitrophenol*
Freezing point-solubility, **4**: 110
- p-Nitrophenol*
Density, **3**: 160
Freezing point-solubility, **4**: 110
- o-Nitrotoluene*
Density, **3**: 160
- m-Nitrotoluene*
Density, **3**: 160
- p-Nitrotoluene*
Density, **3**: 160
Aqueous solution, **3**: 127
Miscibility in water, **3**: 412
- Oleic acid*
Boiling point elevation, **3**: 337
Density, **3**: 161; **7**: 82
Miscibility in water, **3**: 410
Refractive index, **7**: 82
- Oxalic acid*
Heat of solution, **5**: 152
- Palmitic acid*
Density, **3**: 161; **7**: 82
Freezing point-solubility in water, **4**: 406
Refractive index, **7**: 82
- Paraldehyde*
Density, **3**: 160
Viscosity, **5**: 38
- Perchloric acid-Potassium perchlorate*
Solubility relations, **4**: 211
- Phenacetine*
Density, **3**: 161
- Phenanthrene*
Boiling point elevation, **3**: 337
Density, **3**: 161
Freezing point-solubility, **4**: 111
Heat of solution, **5**: 153
- Phenanthrene-Picric acid*
Density, **3**: 197

Ethyl alcohol.—(Continued)

- Phenanthrene picrate*
Boiling point elevation, **3**: 337
Density, **3**: 161
- Phenanthrene picrate-Picric acid*
Density, **3**: 197
- Phenetole*
Density, **3**: 160
Aqueous solution, **3**: 128
Miscibility in water, **3**: 412
Viscosity, **5**: 38
- Phenol*
Density, **3**: 160
Freezing point-solubility, **4**: 110
Heat of solution, **5**: 152
Miscibility in water, **3**: 416
Specific heat, aqueous solution, **5**: 129
Surface tension, **4**: 472
Aqueous solution, **4**: 470
- Phenyl benzoate*
Boiling point elevation, **3**: 337
- Phenyl ether*
Density, **3**: 161
- Phenyl salicylate*
Density, **3**: 161
Aqueous solution, **3**: 128; **4**: 406
Freezing point-solubility in water, **4**: 406
- Phenylacetamide*
Boiling point elevation, **3**: 337
- Phenylacetic acid-Water*
Vapor pressure, partial, **3**: 291
- Phenylcinchoninic acid*
Freezing point-solubility in water, **4**: 406
- Phenylethyl alcohol-Water*
Vapor pressure, partial, **3**: 291
- Phenylhydrazine hydrochloride*
Boiling point elevation, **3**: 336
- Phenylsulfone*
Boiling point elevation, **3**: 337
- Phenylthiourea*
Density, aqueous solution, **3**: 128
- Phenylurea*
Boiling point elevation, **3**: 337
- Phenylurethan*
Boiling point elevation, **3**: 337
- Phthalic anhydride*
Boiling point elevation, **3**: 337
- Picric acid*
Boiling point elevation, **3**: 336
Density, **3**: 159
Viscosity, aqueous solution, **5**: 21
- Picryl chloride*
Boiling point elevation, **3**: 336
- Pinabietic acid*
Boiling point elevation, **3**: 337
- Pinene*
Density, aqueous solution, **3**: 128
Miscibility in water, **3**: 413
- Piperidine*
Viscosity, aqueous solution, **5**: 21
- Piperidinium chloride*
Boiling point elevation, **3**: 336
- Piperidinium nitrate*
Boiling point elevation, **3**: 336
- Potassium acetate*
Boiling point elevation, **3**: 338
Density, **3**: 142
Aqueous solution, **3**: 103; **4**: 410
Freezing point-solubility in water, **4**: 410
Surface tension, **4**: 470
- Potassium antimonyl tartrate*
Density, aqueous solution, **3**: 103
- Potassium bromide*
Density, aqueous solution, **3**: 103
Freezing point-solubility in water, **4**: 410
Specific heat, aqueous solution, **5**: 129

Ethyl alcohol.—(Continued)

- Potassium carbonate*
Freezing point-solubility in water, **4**: 410
- Potassium chloride*
Density, aqueous solution, **3**: 103
Freezing point-solubility in water, **4**: 409
Specific heat, aqueous solution, **5**: 116, 129
- Potassium chloroplatinate*
Freezing point-solubility in water, **4**: 410
- Potassium citrate*
Density, **3**: 142
Aqueous solution, **3**: 103; **4**: 410
Freezing point-solubility in water, **4**: 410
- Potassium cobaltinitrite*
Freezing point-solubility in water, **4**: 410
- Potassium ethylate*
Boiling point elevation, **3**: 338
- Potassium fluoride*
Freezing point-solubility in water, **4**: 409
- Potassium fluosilicate*
Freezing point-solubility in water, **4**: 410
- Potassium formate*
Boiling point elevation, **3**: 338
- Potassium heptylate*
Boiling point elevation, **3**: 338
- Potassium hydrogen p-hydroxybenzoate*
Boiling point elevation, **3**: 338
- Potassium hydrogen tartrate*
Density, **3**: 142
Aqueous solution, **3**: 103; **4**: 410
Freezing point-solubility in water, **4**: 410
- Potassium hydroxide*
Dielectric constant, **6**: 105
- Potassium iodide*
Boiling point elevation, **3**: 338
Density, **3**: 142
Aqueous solution, **3**: 103
Freezing point-solubility in water, **4**: 410
Specific heat, aqueous solution, **5**: 129
Vapor pressure lowering, **3**: 300
Viscosity, **5**: 29
Aqueous solution, **5**: 24
- Potassium iodide-Propyl alcohol*
Density, **3**: 143
- Potassium nitrate*
Density, aqueous solution, **3**: 103
Freezing point-solubility in water, **4**: 410
Specific heat, aqueous solution, **5**: 129
- Potassium nitrate-Silver nitrate*
Freezing point-solubility in water, **4**: 426
- Potassium oleate*
Boiling point elevation, **3**: 338
Density, **3**: 142
- Potassium palmitate*
Density, **7**: 82
Refractive index, **7**: 82
- Potassium perchlorate*
Density, **3**: 142
Freezing point-solubility in water, **4**: 410; **7**: 345
- Potassium picrate*
Freezing point-solubility in water, **4**: 410
- Potassium salicylate*
Boiling point elevation, **3**: 338
- Potassium sodium tartrate*
Density, aqueous solution, **3**: 103; **4**: 410
Freezing point-solubility in water, **4**: 410

Ethyl alcohol.—(Continued)

- Potassium sulfate*
Freezing point-solubility in water, **4**: 410
- Potassium tartrate*
Freezing point-solubility in water, **4**: 410
- Potassium thiocyanate*
Viscosity, aqueous solution, **5**: 24
- Praseodymium chloride*
Boiling point elevation, **3**: 337
- Praseodymium nitrate*
Boiling point elevation, **3**: 337
- Propionamide*
Boiling point elevation, **3**: 336
Density, **3**: 158
- Propyl acetate*
Miscibility in water, **3**: 412
- Propyl alcohol*
Boiling point, **3**: 313
Density, **3**: 158
Heat of solution, **5**: 156, 158
Refractive index, **7**: 81
Specific heat, **5**: 116, 126
Vapor pressure, **3**: 288
Viscosity, **5**: 37
- Propyl alcohol-Sodium bromide*
Density, **3**: 143
- Propyl alcohol-Sodium iodide*
Density, **3**: 143
- Propyl bromide*
Density, aqueous solution, **3**: 126
Miscibility in water, **3**: 411
- Propyl butyrate*
Miscibility in water, **3**: 413
- Propyl formate*
Miscibility in water, **3**: 412
- Propyl propionate*
Miscibility in water, **3**: 412
- Pyridine*
Density, **3**: 159
Heat of solution, **5**: 152
Viscosity, **5**: 38
- Pyrocatechol*
Specific heat, **5**: 126
- Pyrogallol*
Boiling point elevation, **3**: 336
Heat of solution, **5**: 152
- Quinine salicylate*
Density, **3**: 161
Aqueous solution, **3**: 128; **4**: 406
Freezing point-solubility in water, **4**: 406
- Quinoline*
Viscosity, **5**: 38
- Resorcinol*
Boiling point elevation, **3**: 336
Compressibility, **3**: 440
Density, **3**: 160
Dielectric constant, **6**: 102
Freezing point-solubility, **4**: 110
Heat of solution, **5**: 152
Specific heat, **5**: 126
- Rubidium perchlorate*
Density, **3**: 142
Freezing point-solubility in water, **4**: 411
- Salicylaldehyde*
Vapor pressure, partial, **3**: 288
Viscosity, **5**: 38
- Salicylamide*
Boiling point elevation, **3**: 337
- Salicylic acid*
Boiling point elevation, **3**: 336
Density, **3**: 160
Aqueous solution, **3**: 127; **4**: 405
Freezing point-solubility, **4**: 110
Freezing point-solubility in water, **4**: 405
Heat of solution, **5**: 152
- Salicylic acid-Water*
Vapor pressure, partial, **3**: 291

Ethyl alcohol.—(Continued)

- Salicylsulfonic acid*
Boiling point elevation, **3**: 336
- Selenium dioxide*
Boiling point elevation, **3**: 336
- Silver chromate*
Freezing point-solubility in water, **4**: 406
- Silver nitrate*
Boiling point elevation, **3**: 337
- Silver oxide*
Freezing point-solubility in water, **4**: 406
- Sodium acetate*
Boiling point elevation, **3**: 338
Density, **3**: 141
Aqueous solution, **3**: 102; **4**: 409
Freezing point-solubility in water, **4**: 409
- Sodium antimonate*
Density, aqueous solution, **4**: 409
Freezing point-solubility in water, **4**: 409
- Sodium benzoate*
Density, **3**: 141
Aqueous solution, **3**: 102; **4**: 409
Freezing point-solubility in water, **4**: 409
- Sodium bromide*
Boiling point elevation, **3**: 338
Density, **3**: 141
Freezing point-solubility, **4**: 205
Freezing point-solubility in water, **4**: 408
Specific heat, aqueous solution, **5**: 129
Surface tension, **4**: 470
- Sodium bromide-Sodium carbonate*
Freezing point-solubility in water, **4**: 427
- Sodium carbonate*
Freezing point-solubility in water, **4**: 409
Vapor pressure, aqueous solution, **3**: 378
- Sodium carbonate-Sodium chloride*
Freezing point-solubility in water, **4**: 426
- Sodium carbonate-Sodium iodide*
Freezing point-solubility in water, **4**: 427
- Sodium chloride*
Density, aqueous solution, **3**: 102
Freezing point-solubility in water, **4**: 408
Heat of adiabatic expansion, aqueous solution, **5**: 147
Specific heat, aqueous solution, **5**: 116, 129
- Sodium chloride-Sodium sulfate*
Freezing point-solubility in water, **4**: 426
- Sodium chromate*
Density, **3**: 141
- Sodium citrate*
Density, aqueous solution, **3**: 102; **4**: 409
Freezing point-solubility in water, **4**: 409
- Sodium dichloroacetate*
Boiling point elevation, **3**: 338
- Sodium dichromate*
Density, aqueous solution, **3**: 103
- Sodium diethylmalonate*
Boiling point elevation, **3**: 338
- Sodium 2, 4-dinitrophenate*
Freezing point-solubility in water, **4**: 409
- Sodium disulfocinnamate*
Freezing point-solubility in water, **4**: 409
- Sodium ethyl acetoacetate*
Boiling point elevation, **3**: 338

Ethyl alcohol.—(Continued)

- Sodium ethylate*
Boiling point elevation, **3**: 338
- Sodium iodide*
Boiling point elevation, **3**: 338
Density, **3**: 141
Freezing point-solubility, **4**: 205
Freezing point-solubility in water, **4**: 408
Specific heat, aqueous solution, **5**: 129
Surface tension, **4**: 470
Viscosity, **5**: 29
Aqueous solution, **5**: 24
- Sodium laurate*
Boiling point elevation, **3**: 338
- Sodium myristate*
Boiling point elevation, **3**: 338
- Sodium nitrate*
Density, aqueous solution, **3**: 102
Freezing point-solubility in water, **4**: 409
Specific heat, aqueous solution, **5**: 129
- Sodium 2-nitro-4-chlorophenate*
Freezing point-solubility in water, **4**: 409
- Sodium p-nitrophenate*
Freezing point-solubility in water, **4**: 409
- Sodium oleate*
Boiling point elevation, **3**: 338
Density, **3**: 141; **7**: 82
Refractive index, **7**: 82
- Sodium palmitate*
Boiling point elevation, **3**: 338
Density, **7**: 82
Refractive index, **7**: 82
- Sodium perchlorate*
Boiling point elevation, **3**: 338
Density, **3**: 141
Freezing point-solubility in water, **4**: 408
- Sodium p-phenolsulfonate*
Density, **3**: 141
Aqueous solution, **3**: 103; **4**: 409
Freezing point-solubility in water, **4**: 409
- Sodium picrate*
Freezing point-solubility in water, **4**: 409
- Sodium salicylate*
Density, **3**: 141
Aqueous solution **4**: 409
Freezing point-solubility in water, **4**: 409
- Sodium sulfate*
Freezing point-solubility in water, **4**: 408
- Sodium sulfate-Sulfuric acid*
Solubility relations, **4**: 211
- Stannous chloride*
Density, **3**: 137
- Stearic acid*
Density, **3**: 161; **7**: 82
Aqueous solution, **3**: 128; **4**: 406
Freezing point-solubility in water, **4**: 406
Refractive index, **7**: 82
Viscosity, **5**: 39
- Strontium bromide*
Density, **3**: 140
Verdet constant, **6**: 427
- Strontium chloride*
Density, **3**: 140
Verdet constant, **6**: 427
- Strontium dithionate*
Freezing point-solubility in water, **4**: 407
- Strontium nitrate*
Freezing point-solubility in water, **4**: 407
- Strontium perchlorate*
Density **3**: 140

Ethyl alcohol.—(Continued)

- Strontium salicylate*
Density, **3**: 140
Aqueous solution, **3**: 102
Freezing point-solubility in water, **4**: 407
- Strychnine*
Freezing point-solubility in water, **4**: 406
- Strychnine nitrate*
Freezing point-solubility in water **4**: 406
- Succinic acid*
Boiling point elevation, **3**: 336
Density, **3**: 159
- Succinimide*
Boiling point elevation, **3**: 336
Density, **3**: 158
Dielectric constant, **6**: 102
Freezing point-solubility, **4**: 110
Heat of solution, **5**: 152
- Succinonitrile*
Miscibility in water, **3**: 412
Solubility, mutual, **3**: 395, 397
- Sucrose*
Density, aqueous solution, **3**: 128
Freezing point-solubility in water, **4**: 406
Specific heat, aqueous solution, **5**: 129
Viscosity, aqueous solution, **5**: 24
- Sucrose-Water*
Vapor pressure, partial, **3**: 292
- Sulfur*
Freezing point-solubility, **4**: 35
- Sulfuric acid*
Surface tension, **4**: 470
- Tartar emetic*
Density, aqueous solution, **4**: 410
Freezing point-solubility in water, **4**: 410
- Tartaric acid*
Boiling point elevation, **3**: 336
Density, **3**: 159
Aqueous solution, **3**: 126; **4**: 404
Freezing point-solubility in water, **4**: 404
- Tetraethylammonium bromide*
Boiling point elevation, **3**: 337
- Tetraethylammonium chloride*
Boiling point elevation, **3**: 337
- Tetraethylammonium iodide*
Boiling point elevation, **3**: 337
Density, **3**: 160
- Tetrahydronaphthalene*
Density, **3**: 161
Vapor pressure, **3**: 288
Viscosity, **5**: 38
- ar-Tetrahydro- β -naphthol*
Vapor pressure, **3**: 288
Viscosity, **5**: 38
- Tetramethylammonium iodide*
Density, **3**: 159
- Tetrapropylammonium iodide*
Boiling point elevation, **3**: 337
Density, **3**: 161
- Tetrapropylammonium nitrate*
Boiling point elevation, **3**: 337
- Tetryl*
Freezing point-solubility, **4**: 110
Solubility, mutual, **3**: 395
- Thymol*
Heat of solution, **5**: 152
- Toluene*
Density, **3**: 160
Aqueous solution, **3**: 128
Dielectric constant, **6**: 102
Miscibility in water, **3**: 411
Refractive index, **7**: 81
- Toluene*
Vapor pressure, **3**: 288
- p-Toluenesulfonylcinchonicine*
Density, **3**: 161

Ethyl alcohol.—(Continued)

- o-Toluidine*
Density, aqueous solution, **3**: 128
Miscibility in water, **3**: 412
- p-Toluidine*
Boiling point elevation, **3**: 337
Density, **3**: 160
Dielectric constant, **6**: 102
Freezing point-solubility, **4**: 174
Heat of solution, **5**: 152
Viscosity, aqueous solution, **5**: 21
- p-Toluidine-Water*
Vapor pressure, partial, **3**: 291
- Trichloroacetamide*
Boiling point elevation, **3**: 336
- Trichlorolactamide*
Boiling point elevation, **3**: 336
- Triethyl phosphate*
Heat of solution, **5**: 152
- Triethylamine*
Miscibility in water, **3**: 413
- Triethylammonium bromide*
Boiling point elevation, **3**: 336
- Triethylammonium chloride*
Boiling point elevation, **3**: 336
- Triethylammonium iodide*
Boiling point elevation, **3**: 336
- Triethylsulfonium iodide*
Boiling point elevation, **3**: 336
- Trimethylamine chloroplatinate*
Freezing point-solubility in water, **4**: 407
- Trinitrobenzene*
Density, **3**: 159
Aqueous solution, **3**: 127
- Trinitrotoluene*
Freezing point-solubility in water, **4**: 405
Solubility, mutual, **3**: 395
- Triphenylguanidine*
Density, **3**: 161
Aqueous solution, **3**: 128
- Triphenylmethane*
Boiling point elevation, **3**: 337
- Turpentine*
Density, **3**: 161
- Urea*
Boiling point elevation, **3**: 336
Density, **3**: 150
Dielectric constant, **6**: 102
Heat of solution, **5**: 151
Specific heat, **5**: 126
Vapor pressure lowering, **3**: 300
Viscosity, **5**: 34
- Urethan*
Boiling point elevation, **3**: 336
Density, **3**: 158
Dielectric constant, **6**: 102
Freezing point-solubility, **4**: 174
Heat of solution, **5**: 152
- Xylene*
Density, **3**: 160
Aqueous solution, **3**: 128
Electrical conductivity, **6**: 155
Miscibility in water, **3**: 413
- Zinc acetate*
Density, **3**: 138
Aqueous solution, **3**: 102; **4**: 406
Freezing point-solubility in water, **4**: 406
- Zinc chloride*
Boiling point elevation, **3**: 337
Specific heat, **5**: 125
- Zinc p-phenolsulfonate*
Density, **3**: 138
Aqueous solution, **3**: 102; **4**: 406
Freezing point-solubility in water, **4**: 406
- Zinc valerate*
Density, **3**: 138
Aqueous solution, **3**: 102; **4**: 406
Freezing point-solubility in water, **4**: 406

Ethyl *o*-aldehydobenzoate

Cryoscopic constant, 4: 184

Ethyl allyl ether

Viscosity, 5: 43

Ethyl allylacetoacetate

Surface tension, 4: 459

Verdet constant, 6: 430

Ethyl *p*-aminobenzoate-*Isoamyl acetate*

Density, 3: 189

Viscosity, 5: 50

Ethyl β -aminocrotonate

Birefringence, electric, 7: 111

Crystallization velocity, 5: 61

Melting point under pressure, 4: 16

Refractive index, 7: 40

Surface tension, 4: 455

Volume change on melting, 4: 16

Ethyl amyl ether

Dielectric constant, 6: 93

-*Carbon tetrachloride**-*Chlorobenzene**-*Chloroform**-*Diethylisopropyl alcohol****Ethyl amylpropionate**

Magnetic susceptibility, 6: 363

Refractive index, 7: 52

Verdet constant, 6: 430

Ethyl anisate, Verdet constant, 6: 430**Ethyl anthranilate**

Viscosity, 7: 220

-*Isoamyl acetate*

Density, 3: 189

Viscosity, 5: 50

Ethyl azide

Absorption spectra, ultra-violet, 5: 373

Ethyl *p*-azobenzoate-*Ethyl *p*-azoxybenzoate*

Freezing point-solubility, 4: 166

Ethyl *p*-azoxybenzoate

Surface tension, 4: 462

-*Ethyl *p*-azobenzoate****Ethyl benzoate**

Absorption spectra, 5: 333, 345

Azeotropic mixtures, 3: 322

Birefringence, magnetic, 7: 111

Density, 3: 29, 34

Dielectric constant, 6: 94

Diffusion in methyl alcohol, 5: 73

Electrical conductivity, 6: 144

Heat of combustion, 5: 167

Heat of vaporization, 5: 137

Magnetic susceptibility, 6: 363

Polarization of light scattered by, 5: 267

Refractive index, 7: 46

Specific heat, 5: 112

Surface tension, 4: 459

Thermal conductivity, 5: 228

Viscosity, 5: 28, 40, 46, 51; 7: 220

-*Acetic acid**-*Benzene**-*Benzyl benzoate**-*Carbon tetrachloride**-*Chloroform**-*Ethyl acetate**-*Ethyl alcohol**-*Ethyl *p*-bromobenzoate*

Density, 3: 193

-*Ethyl ether*

Boiling point elevation, 3: 341

Vapor pressure, 3: 289

-*Methyl benzoate*

Density, 3: 191

-*Quinoline*

Density, 7: 87

Refractive index, 7: 87

Dispersion, 7: 106

-*Stannic chloride*

Density, 3: 138

Freezing point-solubility, 4: 198

Viscosity, 5: 28

Ethyl benzoate.—(Continued)-*Toluene*

Density, 3: 188

Dielectric constant, 6: 103

Surface tension, 4: 474

Viscosity, 5: 49

-*Trichloroacetic acid*

Density, 3: 153

Freezing point-solubility, 4: 103

Viscosity, 5: 35

-*m-Xylene*

Density, 3: 191

Ethyl benzoylacetate

Absorption spectra, 5: 333

Birefringence, electric, 7: 111

Dielectric absorption, 6: 95

Dielectric constant, 6: 95

Electrical conductivity, 6: 144

Magnetic susceptibility, 6: 363

Refractive index, 7: 54

Verdet constant, 6: 430

-*Tetraethylammonium iodide*

Density, 3: 193

Ethyl benzoylacetoacetate

Dielectric absorption, 6: 96

Dielectric constant, 6: 96

Ethyl benzoyllactate

Surface tension, 4: 461

Ethyl benzyl ether

Dielectric constant, 6: 94

-*Ethyl alcohol****Ethyl benzylacetoacetate**

Birefringence, electric, 7: 112

Ethylbenzylamine-*Glycerol*

Solubility, mutual, 3: 396

Ethyl benzylidenecyanoacetate

Magnetic susceptibility, 6: 363

Ethyl bromide

Absorption spectra, 5: 331

Azeotropic mixtures, 3: 319–320, 324

Boiling point, 3: 217, 335

Compressibility, 3: 41

Critical point data, 3: 246, 248

Density, 3: 28

Solid, 3: 45

Dielectric constant, 6: 82, 84

Diffusion in methyl alcohol, 5: 72

Electrical conductivity, 6: 143

Heat of adsorption on charcoal, 5: 140

Heat of combustion, 5: 168

Heat of vaporization, 5: 137

Ionization by β -particles, 6: 121Ionization by γ -rays, 6: 123

Ionization by X-rays, 6: 123

Ions, recombination of, in, 6: 115

Magnetic susceptibility, 6: 361

Melting point, 3: 45

Polarization of light scattered by, 5: 266

Refractive index

Gas, 7: 10

Liquid, 7: 34, 81

Solidification point, 1: 61

Solubility in water, 3: 387

Solubility of salts in, 4: 207

Specific heat

Gas, 5: 80, 81

Liquid, 5: 107

Surface tension, 4: 436, 449

Thermal conductivity

Gas, 5: 214

Liquid, 5: 227, 228

Pressure, effect of, 5: 227

Vapor pressure, 3: 217

Vapor pressure above 1 atm., 3: 245

Verdet constant, 6: 428

Viscosity, 7: 213, 222

X-rays, absorption coefficients, 6: 13,

16

Ethyl bromide.—(Continued)-*Acetanilide**-*Acetic acid**-*Acetone**-*Air**-*Aluminum bromide**-*Benzene**-*Benzil**-*Benzoic acid**-*Bromine**-*Bromocamphor**-*Camphor**-*Chloral alcoholate**-*p-Dibromobenzene**-*Diethyl tartrate**-*Dimethyl d-dimethoxysuccinate**-*Diphenylamine**-*Dipropyl tartrate**-*Ethyl alcohol**-*Ethyl iodide*

Density, 3: 157

Vapor pressure, 3: 288

-*Iodine-Potassium iodide*

Freezing point-solubility, 4: 268

-*Methyl alcohol*

Density, aqueous solution, 3: 125

Miscibility in water, 3: 411

-*Naphthalene*

Boiling point elevation, 3: 336

-*Nicotine*

Density, 3: 157

-*Propyl alcohol*

Density, aqueous solution, 3: 126

Miscibility in water, 3: 412

-*Pyridine*

Density, 3: 157

-*Sulfur*

Freezing point-solubility, 4: 35

-*Tetrapropylammonium iodide*

Density, 3: 158

Ethyl bromoacetate

Amines, addition of, kinetics, 7: 125

Magnetic susceptibility, 6: 361

Ethyl *p*-bromobenzoate

Refractive index, 7: 46

-*Ethyl benzoate****Ethyl 1-bromobutyrate**

Dielectric constant, 6: 91

Ethyl 1-bromoisobutyrate

Dielectric constant, 6: 91

Ethyl 1-bromopropionate

Dielectric constant, 6: 88

Ethyl butyrate

Absorption spectra, 5: 332, 340

Birefringence, electric, 7: 111

Boiling point, 3: 222

Compressibility, 3: 36

Critical point data, 3: 249

Density, 3: 29, 33

Dielectric constant, 6: 91

Diffusion of vapor in gases, 5: 62

Electrical conductivity, 6: 145

Heat of combustion, 5: 167

Heat of vaporization, 5: 137

Refractive index, 7: 40

Solubility in water, 3: 390

Specific heat, 5: 110

Surface tension, 4: 455

Aqueous solution, 4: 469

Thermal conductivity, 5: 228

Vapor pressure, 3: 222

Verdet constant, 6: 429

Viscosity, 5: 28; 7: 218

-*Azobenzene**-*Benzene**-*p-Dibromobenzene**-*Ethyl alcohol**-*Ethyl isobutyrate*

Density, 3: 186

Refractive index, 7: 85

Dispersion, 7: 104

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ethyl butyrate.—(Continued)

- Hexane*
 - Density, **3**: 186
- Isobutyl acetate*
 - Density, **3**: 185
- Naphthalene*
 - Density, **3**: 186
- Nitrocellulose*
 - Density, **3**: 196
- Stannic chloride*
 - Density, **3**: 138
 - Viscosity, **5**: 28
- Xylene*
 - Density, **3**: 186
- Ethyl caproate**
 - Surface tension, **4**: 437, 458
 - Verdet constant, **6**: 430
- Ethyl caprylate**
 - Critical temperature, **3**: 249
 - Heat of vaporization, **5**: 138
 - Viscosity, **7**: 221
- Ethyl carbamate.** See Urethan.
- Ethyl carbinols**
 - Optical rotatory power, **7**: 360
- Ethyl carbonate**
 - Absorption spectra, **5**: 332
 - Dielectric constant, **6**: 88
- Ethyl chloride**
 - Absorption spectra, **5**: 331, 335
 - Birefringence, electric, **7**: 110
 - Boiling point, **1**: 61; **3**: 217, 231, 336
 - Compressibility, **3**: 41
 - Critical point data, **3**: 231, 248
 - Dielectric constant, **6**: 82, 84
 - Electrons, attachment of, to form ions, **6**: 117
 - Heat of adsorption on charcoal, **5**: 140
 - Heat of combustion, **5**: 168
 - Heat of vaporization, **5**: 137
 - Ionization by α -particles, **6**: 122
 - Ionization by β -particles, **6**: 121
 - Ionization by γ -rays, **6**: 123
 - Ionization by X-rays, **6**: 123
 - Ions, mobility of, in, **6**: 112
 - Ions, recombination of, **6**: 115
 - Joule-Thomson effect, **5**: 146
 - Orthobaric density, **3**: 231
 - Refractivity, **7**: 10
 - Rubber, permeability of, **2**: 272; **5**: 76
 - Solidification point, **1**: 61
 - Solubility in vegetable oils, **3**: 269
 - Solubility in water, **3**: 387
 - Specific heat
 - Gas, **5**: 80, 81, 83
 - Liquid, **5**: 107
 - Thermal conductivity, **5**: 214, 215
 - Vapor pressure, **3**: 217
 - Vapor pressure above 1 atm., **3**: 231
 - Verdet constant, **6**: 428
 - Viscosity, **5**: 3; **7**: 222
- Carbon dioxide**
- p*-*Dibromobenzene**
- p*-*Dichlorobenzene**
- Diphenyl**
- Iodine*
 - Boiling point elevation, **3**: 336
- Naphthalene*
 - Boiling point elevation, **3**: 336
- Sulfur dichloride*
 - Boiling point elevation, **3**: 336
- Sulfur monochloride*
 - Boiling point elevation, **3**: 336
- Ethyl chloroacetate**
 - Absorption spectra, **5**: 337
 - Dielectric constant, **6**: 87
 - Diffusion in methyl alcohol, **5**: 72
 - Electrical conductivity, **6**: 143
 - Flash point, **2**: 162
 - Heat of combustion, **5**: 169
 - Magnetic susceptibility, **6**: 361
 - Refractive index, **7**: 36

Ethyl chloroacetate.—(Continued)

- Specific heat, **5**: 108
- Surface tension, **4**: 450
- Acetone**
- Azobenzene**
- Benzene**
- Camphor**
- p*-*Dibromobenzene**
- Ethyl acetate**
- Ethyl acetoacetate**
- Ethyl alcohol**
- Ethylene bromide*
 - Density, **3**: 155
- Hexane*
 - Density, **3**: 165
- Isoamyl acetate*
 - Density, **3**: 165
- Methyl acetate*
 - Density, **3**: 164
- Methyl benzoate*
 - Density, **3**: 165
- Methyl butyrate*
 - Density, **3**: 165
- Methyl formate*
 - Density, **3**: 157
- Naphthalene*
 - Density, **3**: 165
- Phenanthrene*
 - Density, **3**: 165
- Propyl butyrate*
 - Density, **3**: 165
- Stearic acid*
 - Density, **3**: 165
- Ethyl chlorobenzoates**
 - Refractive index, **7**: 46
- Ethyl 2-chlorocrotonate**
 - Dielectric constant, **6**: 90
 - Refractive index, **7**: 39
- Ethyl chloroformate**
 - Birefringence, electric, **7**: 110
 - Critical temperature, **3**: 248
 - Dielectric constant, **6**: 85
 - Electrical conductivity, **6**: 143
 - Surface tension, **4**: 449
- Ethyl 1-chloropropionate**
 - Dielectric constant, **6**: 88
 - Refractive index, **7**: 37
- Ethyl cinnamate**
 - Absorption spectra, **5**: 333, 347
 - Birefringence, **7**: 111
 - Density, **3**: 30
 - Dielectric constant, **6**: 95
 - Electrical conductivity, **6**: 145
 - Magnetic susceptibility, **6**: 363
 - Refractive index, **7**: 54
 - Surface tension, **4**: 437, 460
 - Verdet constant, **6**: 430
- Ethyl *o*-cresyl ether**, viscosity, **7**: 220
- Ethyl *p*-cresyl ether**
 - Specific heat, **5**: 112
 - Viscosity, **7**: 220
- Ethyl crotonate**
 - Absorption spectra, ultra-violet, **5**: 340, 368
 - Critical temperature, **3**: 249
 - Dielectric constant, **6**: 90
 - Refractive index, **7**: 39
 - Verdet constant, **6**: 429
- Ethyl cumate**
 - Verdet constant, **6**: 430
- Ethyl cyanide.** See Propionitrile.
- Ethyl cyanoacetate**
 - Absorption spectra, **5**: 337
 - Birefringence, **7**: 111
 - Density, **3**: 28
 - Dielectric absorption, **6**: 88
 - Dielectric constant, **6**: 88
 - Electrical conductivity, **6**: 144
 - Aqueous solution, **6**: 269
 - Magnetic susceptibility, **6**: 361
 - Refractive index, **7**: 37

Ethyl cyanoacetate.—(Continued)

- Surface tension, **4**: 452
- Potassium iodide*
 - Density, **3**: 142
- Tetraethylammonium iodide*
 - Density, **3**: 172
- Ethyl cyanoacetoacetate**
 - Electrical conductivity, aqueous solution, **6**: 281
 - Refractive index, **7**: 41
- Ethyl 1-cyanocyclobutane-1-carboxylate**
 - Surface tension, **4**: 458
- Ethyl cyclobutanecarboxylate**
 - Surface tension, **4**: 457
 - Viscosity, **7**: 219
- Ethylcycloheptane**
 - Heat of combustion, **5**: 163
- Ethyl cyclohexanecarboxylate**
 - Viscosity, **7**: 220
- Ethyl cyclopentanonecarboxylate**
 - Viscosity, **7**: 219
- Ethyl cyclopropanecarboxylate**
 - Viscosity, **7**: 217
- Ethyl diacetoacetate**
 - Electrical conductivity, aqueous solution, **6**: 287
 - Refractive index, **7**: 44
- Ethyl diacetyl glycerate**
 - Acetic acid**
 - Benzene**
- Ethyl dibromocinnamate**
 - Magnetic susceptibility, **6**: 363
- Ethyl 2, 7-dibromofluorene-9-acetate**
 - Quinoline*
 - Density, **7**: 88
 - Refractive index, **7**: 88
 - Dispersion, **7**: 108
- Ethyl dichloroacetate**
 - Dielectric constant, **6**: 86
 - Electrical conductivity, **6**: 143
 - Heat of combustion, **5**: 168
 - Refractive index, **7**: 36
 - Specific heat, **5**: 108
 - Surface tension, **4**: 450
- Ethyl alcohol**
- Ethyl diethylacetoacetate**
 - Absorption spectra, **5**: 333, 347, 368
 - Refractive index, **7**: 53
 - Saponification, kinetics of, **7**: 131
 - Surface tension, **4**: 460
 - Viscosity, **5**: 38; **7**: 221
- Benzene**
- Ethyl alcohol**
- Pyridine*
 - Density, **3**: 172
 - Viscosity, **5**: 42
- Ethyl diethylpropylacetate**
 - Viscosity, **7**: 221
- Ethyl α -dihydrocampholenate**
 - Surface tension, **4**: 461
- Ethyl dimethylacetoacetate**
 - Absorption spectra, **5**: 344
 - Birefringence, electric, **7**: 111
 - Refractive index, **7**: 45
 - Saponification, kinetics of, **7**: 131
 - Surface tension, **4**: 458
 - Viscosity, **7**: 220
- Diethyl tartrate**
- Ethyl dipropylacetate**, viscosity, **7**: 221
- Ethyl dipropylacetoacetate**
 - Viscosity, **7**: 221
- Ethyl disulfide**
 - Birefringence, electric, **7**: 111
 - Critical temperature, **3**: 248
 - Refractive index, **7**: 36
- Ethyl dithiobenzoate**, viscosity, **7**: 220
- Ethyl di-*p*-toluylglycerate**
 - Acetone**
 - Ethyl alcohol**

Ethyl di(trichloroacetyl)tartrate

-Nitrobenzene

Density, **3**: 178**Ethyl elaidate**Viscosity, **7**: 222

-Isoamyl acetate

Viscosity, **5**: 50**Ethyl ether**Absorption spectra, **5**: 332, 337Angle of contact, **4**: 434Azeotropic mixtures, **3**: 318, 320, 324Birefringence, electric, **7**: 111Boiling point, **3**: 219, 341Compressibility, **3**: 42Aqueous solution, **3**: 440Critical point data, **3**: 241, 248Critical potentials, **6**: 72Cryoscopic constant, **4**: 183

Density

Aqueous solution, **3**: 112, 114Liquid, **3**: 28Solid, **3**: 45Dielectric constant, **6**: 82, 87, 105, 106Diffusion in free air, **1**: 358Diffusion in benzene, **5**: 74Diffusion in methyl alcohol, **5**: 72Diffusion of vapor in gases, **5**: 62Electrical conductivity, **6**: 143Aqueous solution, **6**: 268Explosion in closed vessels, **2**: 191Flash point, **2**: 161Freezing point lowering of aqueous solution, **4**: 262Heat of adsorption on charcoal, **5**: 140Heat of combustion, **5**: 167Heat of solution in water, **5**: 149Heat of vaporization, **5**: 137, 138Heat of wetting, **5**: 142Ignition temperature, **2**: 174Inflammability, limits of, **2**: 180Interfacial tension against various solutions, **4**: 438Gas, variation with, **4**: 475Internal pressure, **4**: 19Ionization by α -particles, **6**: 122Ionization by β -particles, **6**: 121Ionization by γ -rays, **6**: 123Ions, mobility of, in, **6**: 112Ions, recombination of, in, **6**: 115Light, transmission of, by, **5**: 265Magnetic susceptibility, **6**: 361Melting point, **1**: 54; **3**: 45Orthobaric density, **3**: 241

Polarization of light scattered by

Gas, **5**: 266Liquid, **5**: 267Pressure-volume relations for gas, **3**: 439

Refractive index

Gas, **7**: 10Liquid, **7**: 12, 36Solidification point, **1**: 61Solubility in water, **3**: 388Solubility of salts in, **4**: 210

Sound, velocity of

Gas, **6**: 463Liquid, **6**: 464

Specific heat

Gas, **5**: 81Liquid, **5**: 108Saturated vapors, **5**: 83Surface tension, **4**: 436, 451Pressure, effect of, **4**: 475

Thermal conductivity

Gas, **5**: 214, 215Liquid, **5**: 228Pressure, effect of, **5**: 227

Vapor pressure

Aqueous solution, **3**: 365**Ethyl ether.—(Continued)**Liquid, **3**: 219Solid, **3**: 209Vapor pressure above 1 atm., **3**: 241Verdet constant, **6**: 427Dispersion, **6**: 433

Viscosity

Gas, **5**: 3Liquid, **5**: 11; **7**: 216X-ray diffraction bands, **1**: 352

-Acenaphthene*

-Acetal*

-Acetaldehyde*

-Acetanilide*

-Acetanilide*-Chloroform

-Acetic acid*

-Acetic acid*-Glycerol

-Acetone*

-Acetone*-Benzene

-Acetophenone oxime*

-Acetylsalicylic acid*

-o-Aminobenzoic acid*

-Ammonia*

-Amyl camphocarboxylate*

-Amyl trichloroacetate*

-Amylene*

-Aniline*

-Anisole*

-Anthraquinone*

-Antimony trichloride*

-Arsenous chloride*

-Arsenous sulfide*

-Azelaic acid*

-Azobenzene*

-Benzene*

-Benzene*-Iodine

-Benzil*

-Benzilic acid*

-Benzoic acid*

-Benzophenone*

-Benzyl alcohol*

-Benzylamine*

-Benzylethylamine*

-Benzylmethylaniline*

-Bismuth chloride*

-Bromine*

-Bromoacetic acid*

-Bromoform*

- α -Bromonaphthalene*

-1-Bromopropionic acid*

-Bromosuccinic acid*

-Butylamine*

-Butyric acid*

-Cadmium iodide*

-Caffeine*

-Calcium perchlorate*

-Camphor*

-Camphor*-Carbon disulfide

-Camphorcarboxylic acid*

-Camphoric acid*

-Carbon dioxide*

-Carbon disulfide*

-Carbon disulfide*-Iodine

-Carbon disulfide*-Naphthalene

-Carbon disulfide*-Picric acid

-Carbon monoxide*

-Carbon tetrachloride*

-Catechol*

-Chloral alcoholate*

-Chloral ammonia*

-Chloral hydrate*

-Chlorine*

-Chloroacetic acid*

-o-Chlorobenzoic acid*

-Chloroform*

-Chloroform*-Iodine

-Chloroform*-Naphthalene

-Chloroform*-Picric acid

-Chromic thiocyanate*

-Chrysene*

-Citric acid*

Ethyl ether.—(Continued)

-Coniine*

-Cresol*

-m-Cresol*

- α -Crotonic acid*

-Cupric chloride*

-Cyanoacetic acid*

-p-Dibromobenzene*

-1, 2-Dibromopropionic acid*

-1, 2-Dibromosuccinic acid*

-Dichloroacetamide*

-Dichloroacetic acid*

-Dicyanodiamide*

-Diethylamine*

-Diethyltin iodide*

-o-Dimethoxybenzene*

-Dimethylamine*

-m-Dinitrobenzene*

-2, 4-Dinitrobenzoic acid*

-3, 5-Dinitrobenzoic acid*

-Diphenyl*

-Diphenylamine*

-Diphenylamine*-Ethyl alcohol

-Dipropylamine*

-Ethyl acetate*

-Ethyl alcohol*

-Ethyl alcohol*-Iodine

-Ethyl alcohol*-Mercuric chloride

-Ethyl benzoate*

-Ethyl iodide

Density, **3**: 158Freezing point-solubility, **4**: 109Surface tension, **4**: 472

-Ethyl trichloroacetate

Density, **3**: 165

-Ethylacetanilide

Boiling point elevation, **3**: 341

-Ethylamine

Distribution coefficients in water, **3**: 425

-Ethylene bromide

Density, **3**: 155Dielectric constant, **6**: 102

-Ethylene chloride

Density, **3**: 155

-Ferric chloride

Boiling point elevation, **3**: 341Distribution coefficients in hydrochloric acid, **3**: 421

-Ferric thiocyanate

Distribution coefficients in nitric acid, **3**: 421Distribution coefficients in water, **3**: 421

-Formaldehyde

Distribution coefficients in water, **3**: 422

-Formanilide

Boiling point elevation, **3**: 341

-Formic acid

Distribution coefficients in water, **3**: 422Miscibility in water, **3**: 410

-Fumaric acid

Distribution coefficients in water, **3**: 426Freezing point-solubility, **4**: 112

-Gallic acid

Density, **3**: 168Distribution coefficients in water, **3**: 430

-Gallium chloride

Distribution coefficients in water, **3**: 421

-Gentisic acid

Distribution coefficients in water, **3**: 430

-Glutaric acid

Distribution coefficients in water, **3**: 427

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ethyl ether.—(Continued)

- Glycolanilide*
Boiling point elevation, **3**: 341
- Glycollic acid*
Distribution coefficients in water, **3**: 424
- Guaiacol*
Viscosity, **5**: 41
- Heptylamine*
Distribution coefficients in water, **3**: 430
- Hippuric acid*
Distribution coefficients in water, **3**: 431
- Homophthalic acid*
Distribution coefficients in water, **3**: 431
- Hydrogen*
Ions, mobility of, in, **6**: 113
- Hydrogen bromide*
Boiling point elevation, **3**: 328
Freezing point-solubility, **4**: 186
- Hydrogen chloride*
Boiling point elevation, **3**: 328
Distribution coefficients in water, **3**: 419
Freezing point-solubility, **4**: 186
Miscibility in water, **3**: 410
- Hydrogen peroxide*
Distribution coefficients in water, **3**: 419
- Hydroquinol*
Boiling point elevation, **3**: 341
Distribution coefficients in water, **3**: 428
- p-Hydroxybenzoic acid*
Distribution coefficients in water, **3**: 430
- Hydroxybutyric acid*
Distribution coefficients in water, **3**: 426
- Iodine*
Boiling point elevation, **3**: 341
Density, **3**: 132
Freezing point-solubility, **4**: 33
Viscosity, **5**: 27
- Iodine-Methyl iodide*
Freezing point-solubility, **4**: 268
- o-Iodobenzoic acid*
Distribution coefficients in water, **3**: 429
- 2-Iodopropionic acid*
Distribution coefficients in water, **3**: 425
- Iridium monochloride*
Distribution coefficients in water, **3**: 421
- Isoamyl alcohol*
Heat of solution, **5**: 157
- Isoamylamine*
Distribution coefficients in water, **3**: 427
- Isobutyl alcohol*
Heat of solution, **5**: 157
- Isobutylacetamide*
Boiling point elevation, **3**: 341
- Isobutyric acid*
Distribution coefficients in water, **3**: 426
- Isophthalic acid*
Distribution coefficients in water, **3**: 430
- Isovaleric acid*
Distribution coefficients in water, **3**: 427
- Itaconic acid*
Distribution coefficients in water, **3**: 427
- Lactanilide*
Boiling point elevation, **3**: 341

Ethyl ether.—(Continued)

- Lactic acid*
Distribution coefficients in water, **3**: 425
- Lead lignocerate*
Density, **3**: 138
- Lead oleate*
Density, **3**: 138
- Lead stearate*
Density, **3**: 138
- Levulinic acid*
Distribution coefficients in water, **3**: 427
- Lithium perchlorate*
Density, **3**: 141
- Magnesium bromide*
Freezing point-solubility, **4**: 203
Solubility, mutual, **3**: 394
- Magnesium bromide etherate*
Density, **3**: 140
- Magnesium iodide*
Freezing point-solubility, **4**: 204
Solubility, mutual, **3**: 394
- Magnesium perchlorate*
Density, **3**: 140
- Maleic acid*
Distribution coefficients in water, **3**: 426
Freezing point-solubility, **4**: 113
- Malic acid*
Distribution coefficients in water, **3**: 426
- Malonic acid*
Boiling point elevation, **3**: 341
Distribution coefficients in water, **3**: 425
Miscibility in water, **3**: 411
- Mandelic acid*
Distribution coefficients in water, **3**: 431
- Menthol*
Heat of solution, **5**: 153
- Mercuric chloride*
Boiling point elevation, **3**: 341
Density, **3**: 139
Distribution coefficients in water, **3**: 421
Freezing point-solubility, **4**: 198
- Mercuric cyanide*
Distribution coefficients in potassium cyanide solution, **3**: 421
- Mercuric iodide-Potassium iodide*
Freezing point-solubility in water, **4**: 428
- Methyl alcohol*
Density, **3**: 151
Heat of solution, **5**: 151, 156
Miscibility in water, **3**: 410
Viscosity, **5**: 34
- Methyl benzoate*
Density, **3**: 168
- Methyl formate*
Density, **3**: 157
- Methyl salicylate*
Vapor pressure, **3**: 289
- Methylacetanilide*
Boiling point elevation, **3**: 341
- Methylamine*
Distribution coefficients in water, **3**: 423
- 1-Methylpiperidine*
Distribution coefficients in water, **3**: 429
- Naphthalene*
Boiling point elevation, **3**: 341
Density, **3**: 168
Freezing point-solubility, **4**: 174
Heat of solution, **5**: 153
- Nickel chloride*
Distribution coefficients in hydrochloric acid, **3**: 421

Ethyl ether.—(Continued)

- Nicotine*
Density, **3**: 168
- Nitric acid*
Distribution coefficients in water, **3**: 421
- Nitrobenzene*
Density, **3**: 168
Specific heat, **5**: 127
Vapor pressure, **3**: 289
- Nitrobenzoic acid (o-, m-)*
Distribution coefficients in water, **3**: 429
- Nitronaphthalene*
Heat of solution, **5**: 153
- o-Nitrophenol*
Freezing point-solubility, **4**: 116
Heat of solution, **5**: 153
- m-Nitrophenol*
Freezing point-solubility, **4**: 116
- p-Nitrophenol*
Freezing point-solubility, **4**: 116
- Oleic acid*
Density, **3**: 168
Vapor pressure lowering, **3**: 300
- Oxalic acid*
Distribution coefficients in water, **3**: 423
- Palladium chloride*
Distribution coefficients in water, **3**: 421
- Palmitic acid*
Density, **3**: 168
- Paraldehyde*
Heat of solution, **5**: 157
- Pentachloroethane*
Density, **3**: 153
Vapor pressure, **3**: 287
Viscosity, **5**: 35
- Pentane*
Density, **3**: 168
Dielectric constant, **6**: 102
- Phenanthrene*
Density, **3**: 168
Freezing point-solubility, **4**: 174
- Phenetole*
Boiling point elevation, **3**: 341
Density, **3**: 168
Viscosity, **5**: 41
- Phenol*
Boiling point elevation, **3**: 341
Heat of solution, **5**: 153
- Phenyl ether*
Density, **3**: 168
Viscosity, **5**: 41
- Phenylacetic acid*
Distribution coefficients in water, **3**: 431
- Phenylurethan*
Boiling point elevation, **3**: 341
- Phosphoric acid*
Freezing point-solubility, **4**: 189
- Phosphorus*
Density, **3**: 132
- Phosphorus oxychloride*
Boiling point elevation, **3**: 341
- Phthalic acid*
Distribution coefficients in water, **3**: 430
- Picric acid*
Distribution coefficients in water, **3**: 427
- Pimelic acid*
Distribution coefficients in water, **3**: 430
- Pinabietic acid*
Boiling point elevation, **3**: 341
- Pinene hydrochloride*
Density, **3**: 168

Ethyl ether.—(Continued)

- Piperidine*
Distribution coefficients in water, 3: 427
- Platinic chloride*
Distribution coefficients in water, 3: 421
- Propionamide*
Boiling point elevation, 3: 341
- Propionic acid*
Distribution coefficients in water, 3: 425
Miscibility in water, 3: 410
- Propyl alcohol*
Density, 3: 164
Heat of solution, 5: 156
Viscosity, 5: 40
- Pyridine*
Heat of solution, 5: 153
- Pyrocatechol*
Viscosity, 5: 41
- Pyrogallol*
Boiling point elevation, 3: 341
Heat of solution, 5: 153
- Pyruvic acid*
Distribution coefficients in water, 3: 425
- Quinine*
Distribution coefficients in water, 3: 433
- Quinoline*
Boiling point elevation, 3: 341
- Resorcinol*
Boiling point elevation, 3: 341
Distribution coefficients in water, 3: 428
Viscosity, 5: 41
- Resorcylic acid*
Distribution coefficients in water, 3: 430
- Saccharin*
Distribution coefficients in hydrochloric acid, 3: 429
- Salicylaldehyde*
Vapor pressure, 3: 289
Viscosity, 5: 41
- Salicylamide*
Boiling point elevation, 3: 341
- Salicylic acid*
Boiling point elevation, 3: 341
Density, 3: 168
Distribution coefficients in water, 3: 430
- Sebacic acid*
Distribution coefficients in water, 3: 432
- Sodium acetate*
Distribution coefficients in acetic acid, 3: 422
- Sodium chloride*
Distribution coefficients in acetic acid, 3: 422
- Stannic chloride*
Distribution coefficients in water, 3: 421
- Stearic acid*
Density, 3: 168
- Suberic acid*
Distribution coefficients in water, 3: 431
- Succinic acid*
Density, aqueous solution, 3: 129
Distribution coefficients in water, 3: 426
Freezing point-solubility in water, 4: 413
Miscibility in water, 3: 415
- Succinonitrile*
Freezing point-solubility in water, 4: 413

Ethyl ether.—(Continued)

- Sulfur*
Freezing point-solubility, 4: 35
- Sulfur dioxide*
Density, 3: 135
Viscosity, 5: 27
- Sulfuric acid*
Density, 3: 136
Aqueous solution, 3: 101
Vapor pressure lowering, 3: 300
Viscosity, 5: 27
Aqueous solution, 5: 24
- Tartaric acid*
Density, 3: 165
Distribution coefficients in water, 3: 426
- Tellurium dichloride*
Distribution coefficients in water, 3: 420
- Tetrachloroethane*
Density, 3: 153
Viscosity, 5: 36
- Tetrahydronaphthalene*
Vapor pressure, 3: 289
- Tetramethylsuccinic acid*
Boiling point elevation, 3: 341
- Tetryl*
Freezing point-solubility, 4: 116
- Thioacetic acid*
Distribution coefficients in water, 3: 423
- Thiocyanic acid*
Boiling point elevation, 3: 341
- Thymol*
Boiling point elevation, 3: 341
Heat of solution, 5: 153
- Toluene*
Density, 3: 168
Viscosity, 5: 41
- p-Toluidine*
Boiling point elevation, 3: 341
- p-Toluidine chloroacetate*
Boiling point elevation, 3: 341
- Triamylammonium picrate*
Boiling point elevation, 3: 341
- Trichloroacetamide*
Boiling point elevation, 3: 341
- Trichloroacetic acid*
Density, 3: 153
Distribution coefficients in water, 3: 423
Viscosity, 5: 35
- Trichlorolactamide*
Boiling point elevation, 3: 341
- Triethylamine*
Miscibility in water, 3: 415
- Triethyltin*
Boiling point elevation, 3: 341
- Trimethylamine*
Distribution coefficients in water, 3: 425
- Trimethylglutaric acid*
Boiling point elevation, 3: 341
- 2, 4, 6-Trinitrobenzoic acid*
Distribution coefficients in water, 3: 429
- Triphenylmethane*
Density, 3: 169
- Turpentine*
Density, 3: 169
Vapor pressure, 3: 289
- Uranyl nitrate*
Boiling point elevation, 3: 341
- Urethan*
Boiling point elevation, 3: 341
Density, 3: 164
- Valeric acid*
Distribution coefficients in water, 3: 427

Ethyl ether.—(Continued)

- Vanillin*
Distribution coefficients in water, 3: 431
- Zinc chloride*
Boiling point elevation, 3: 341
Density, 3: 138
Distribution in aqueous hydrochloric acid, 3: 421
- Ethyl p-ethoxybenzalamino- α -methylcinamate**, surface tension, 4: 463
- Ethyl o-ethoxybenzoate**
Dielectric absorption, 6: 96
Dielectric constant, 6: 96
- Ethyl β -ethoxycrotonate**
Absorption spectra, ultra-violet, 5: 368
- Ethyl ethylacetoacetate**
Absorption spectra, 5: 344
Electrical conductivity, aqueous solution, 6: 288
Magnetic susceptibility, 6: 363
Refractive index, 7: 45
Saponification, kinetics of, 7: 131
Surface tension, 4: 458
Viscosity, 5: 38; 7: 219
- Benzene**
- Ethyl alcohol**
- Pyridine*
Density, 3: 171
Viscosity, 5: 42
- Ethyl ethylpropylacetate**, viscosity, 7: 220
- Ethyl ethylsulfonate**
Surface tension, 4: 451
- Ethyl α -ethylvalerate**, viscosity, 7: 220
- Ethyl fluoride**
Solubility in non-aqueous liquids, 3: 269
- Ethyl formate**
Absorption spectra, 5: 336
Azeotropic mixtures, 3: 318, 319
Birefringence, electric, 7: 111
Boiling point, 3: 218, 339
Critical point data, 3: 240, 248
Density, 3: 28, 33
Aqueous solution, 3: 114
Dielectric constant, 6: 82, 86
Diffusion of vapor in gases, 5: 62
Electrical conductivity, 6: 145
Flash point, 2: 161
Freezing point lowering of aqueous solution, 4: 262
Heat of adsorption on charcoal, 5: 140
Heat of combustion, 5: 167
Heat of solution in water, 5: 148
Heat of vaporization, 5: 137
Ions, mobility of, in, 6: 112
Magnetic susceptibility, 6: 361
Orthobaric density, 3: 239
Polarization of light scattered by
Gas, 5: 265
Liquid, 5: 266
Refractive index
Gas, 7: 10
Liquid, 7: 35
Saponification constant, 7: 135
Saponification, kinetics of, 7: 134
Solubility in water, 3: 387
Specific heat, 5: 108
Surface tension, 4: 450
Aqueous solution, 4: 467
Thermal conductivity, 5: 228
Vapor pressure, 3: 218
Aqueous solution, 3: 364
Vapor pressure above 1 atm., 3: 239
Verdet constant, 6: 428
Viscosity
Gas, 5: 3
Liquid, 5: 28; 7: 214
X-rays, absorption coefficients, 6: 14
- Benzene**
- Benzil**
- Benzoic acid**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ethyl formate.—(Continued)

- Cadmium iodide*
- Camphor*
- Ethyl acetate*
- Magnesium iodide
 - Freezing point-solubility, 4: 204
- Methyl acetate
 - Density, 3: 164
- Nitrocellulose
 - Density, 3: 196
- Phenyl benzoate
 - Boiling point elevation, 3: 339
- Stannic chloride
 - Density, 3: 137
 - Freezing point-solubility, 4: 198
 - Viscosity, 5: 28
- Sulfur
 - Freezing point-solubility, 4: 35
- Toluene
 - Surface tension, 4: 472
- Xylene
 - Density, 3: 164
- Ethyl formylphenylacetate**
 - Dielectric constant, 6: 95
- Ethyl heptylate**, viscosity, 7: 220
- Ethyl hexyl ether**, viscosity, 7: 220
- Ethyl hexylpropionate**
 - Magnetic susceptibility, 6: 363
 - Refractive index, 7: 55
 - Verdet constant, 6: 430
- Ethyl hydrocinnamate**
 - Refractive index, 7: 55
 - Surface tension, 4: 437, 460
 - Verdet constant, 6: 430
- Ethyl hydrogen camphorate**
 - Optical rotatory power, 7: 447
 - Refractive index, 7: 58
- Ethyl hydrogen fumarate**
 - Electrical conductivity, aqueous solution, 6: 274
 - Refractive index, 7: 39
- Ethyl hydrogen malonate**
 - Electrical conductivity, aqueous solution, 6: 270
 - Heat of solution in water, 5: 149
- Ethyl hydrogen phthalate**
 - Electrical conductivity, aqueous solution, 6: 295
 - Refractive index, 7: 50
- Ethyl hydrogen sulfate**
 - Electrical conductivity, aqueous solution, 6: 263
- Ethyl hydrogen tartrate**
 - Optical rotatory power, 7: 381
- Ethyl hydroxybenzoate**
 - Isoamyl acetate
 - Viscosity, 5: 50
- Ethyl *m*-hydroxybenzoate**
 - Surface tension, 4: 459
 - Isoamyl acetate
 - Density, 3: 189
- Ethyl *p*-hydroxybenzoate**
 - Heat of combustion, 5: 167
 - Surface tension, 4: 459
- Ethyl hydroxymethyleneacetoacetate**
 - Dielectric absorption, 6: 92
 - Dielectric constant, 6: 92
- Ethyl hydroxymethylenemalonate**
 - Dielectric constant, 6: 94
- Ethyl hydroxymethylenephylacetate**
 - Dielectric absorption, 6: 95
 - Dielectric constant, 6: 95
- Ethyl β -hydroxy- α -phenylacrylate**
 - Surface tension, 4: 460
- Ethyl iodide**
 - Absorption spectra, 5: 331, 335
 - Azeotropic mixtures, 3: 319-320, 323
 - Birefringence, electric, 7: 110
 - Boiling point, 3: 217, 336
 - Compressibility, 3: 41

Ethyl iodide.—(Continued)

- Condensation on ions and nuclei, 6: 117
- Density, 3: 28
- Aqueous solution, 3: 113
- Solid, 3: 45
- Dielectric constant, 6: 82, 85
- Diffusion in methyl alcohol, 5: 72
- Electrical conductivity, 6: 143
- Heat of adsorption on charcoal, 5: 140
- Heat of combustion, 5: 168
- Heat of vaporization, 5: 137
- Ionization by α -particles, 6: 122
- Ionization by β -particles, 6: 121
- Ionization by γ -rays, 6: 123
- Ions, mobility of, in, 6: 112
- Magnetic susceptibility, 6: 361
- Melting point, 3: 45
- Refractive index
 - Gas, 7: 10
 - Liquid, 7: 12, 34, 77
- Solubility in water, 3: 387
- Specific heat, 5: 107
- Surface tension, 4: 436, 449
- Thermal conductivity
 - Gas, 5: 214
 - Liquid, 5: 227, 228
 - Pressure, effect of, 5: 227
- Vapor pressure, 3: 217
- Verdet constant, 6: 427
- Viscosity, 7: 213, 222
- Acetanilide*
- Acetic acid*
- Acetic acid*-Benzene
- Benzene*
- Benzene*-Methyl iodide
- Benzil*
- Camphor*
- Carbon disulfide*
- Carbon tetrachloride*
- Diethyl tartrate*
- Diphenylamine*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl bromide*
- Ethyl ether*
- Hexane
 - Vapor pressure, 3: 288
- Iodine
 - Density, 3: 132
- Mercuric iodide
 - Boiling point elevation, 3: 338
- Methyl alcohol
 - Density, 3: 150
 - Surface tension, 4: 471
 - Viscosity, 5: 34
- Methyl iodide
 - Density, 3: 149
- Methyl iodide-Xylene
 - Density, 3: 197
- Naphthalene
 - Density, 3: 158
- Nitromethane
 - Vapor pressure, 3: 287
- Phenetole
 - Density, 3: 158
 - Viscosity, 5: 37
- Xylene
 - Density, 3: 158
- Ethyl iodoacetate**
 - Magnetic susceptibility, 6: 361
- Ethyl 2-iodopropionate**
 - Dielectric constant, 6: 88
- Ethyl isoamylacetoacetate**
 - Surface tension, 4: 461
- Ethyl isobutyl ether**
 - Heat of vaporization, 5: 137
 - Viscosity, 7: 218
- Ethyl 1-isobutylacetoacetate**
 - Magnetic susceptibility, 6: 363

Ethyl isobutyrate

- Azeotropic mixtures, 3: 321
- Compressibility, 3: 36
- Critical point data, 3: 243, 249
- Density, 3: 29
- Diffusion of vapor in gases, 5: 62
- Electrical conductivity, 6: 145
- Heat of combustion, 5: 167
- Heat of vaporization, 5: 137
- Specific heat, 5: 110
- Surface tension, 4: 455
- Vapor pressure above 1 atm., 3: 243
- Verdet constant, 6: 429
- Viscosity, 7: 218
- Ethyl butyrate*
- Hexane
 - Density, 3: 186
- Isobutyl acetate
 - Density, 3: 185
- Isohexane
 - Density, 3: 186
- Ethyl isocyanate**
 - Absorption spectra, 5: 336
 - Heat of combustion, 5: 167
 - Magnetic susceptibility, 6: 361
- Ethyl isothiocyanate**
 - Absorption spectra, 5: 331
 - Birefringence, magnetic, 7: 110
 - Dielectric constant, 6: 85
 - Electrical conductivity, 6: 143
 - Heat of combustion, 5: 169
 - Surface tension, 4: 449
- Ethyl isovalerate**
 - Critical temperature, 3: 249
 - Density, 3: 29
 - Heat of vaporization, 5: 137
 - Magnetic susceptibility, 6: 362
 - Refractive index, 7: 42
 - Surface tension, 4: 437, 457
 - Verdet constant, 6: 429
- Ethyl alcohol*
- Hydrogen peroxide
 - Distribution coefficients in water, 3: 419
- Isobutyl acetate
 - Density, 3: 186
 - Refractive index, 7: 85
 - Dispersion, 7: 104
- Ethyl lactate**
 - Absorption spectra, 5: 332
 - Azeotropic mixtures, 3: 321
 - Density, 3: 29
 - Magnetic susceptibility, 6: 362
 - Surface tension, 4: 452
 - Benzene*-Methyl propionate-Toluene
 - Propyl acetate
 - Surface tension, 4: 473
- Ethyl laurate**, viscosity, 7: 221
- Ethyl levulinate**
 - Absorption spectra, 5: 342
 - Dielectric constant, 6: 92
 - Refractive index, 7: 42
- Ethyl mandelate**, viscosity, 7: 220
- Ethyl methoxybenzoate** (*o*-, *m*-, *p*-)
 - Refractive index, 7: 51
 - Verdet constant, 6: 430
- Ethyl methylacetoacetate**
 - Absorption spectra, 5: 342
 - Magnetic susceptibility, 6: 362
 - Refractive index, 7: 42
 - Diethyl tartrate*
- Ethyl α -methylbutyrate**, viscosity, 7: 219
- Ethyl methylethylacetoacetate**
 - Refractive index, 7: 48
 - Viscosity, 7: 220
- Ethyl methylpropylacetoacetate**
 - Viscosity, 7: 221
- Ethyl monobenzoylglycerate**
 - Benzene*
- Ethyl α -naphthoate**
 - Refractive index, 7: 59
 - Verdet constant, 6: 429

Ethyl β -naphthoate

Refractive index, **7**: 59
Verdet constant, **6**: 429

-Quinoline

Density, **7**: 88
Refractive index, **7**: 88
Dispersion, **7**: 107

Ethyl α -naphthyl ether

Dielectric constant, **6**: 96

Ethyl nitrate

Absorption spectra, **5**: 331, 335
Compressibility, **3**: 36
Dielectric constant, **6**: 85
Diffusion in methyl alcohol, **5**: 72
Electrical conductivity, **6**: 143
Heat of combustion, **5**: 167
Heat of solution in water, **5**: 148
Inflammability, limits of, **2**: 181
Refractive index, **7**: 34
Saponification by water, **7**: 137
Surface tension, **4**: 449
-Acetamide*
-Acetic acid*
- α -Bromonaphthalene*
-Carbon disulfide*
-Heptane
Density, **3**: 158; **7**: 81
Refractive index, **7**: 81
Dispersion, **7**: 103
-Tetraethylammonium iodide
Density, **3**: 158
-Tetrapropylammonium iodide
Density, **3**: 158

Ethyl nitrite

Absorption spectra, **5**: 335
Heat of combustion, **5**: 167

Ethyl *o*-nitrobenzoate

Cryoscopic constant, **4**: 183

Ethyl nitrophenylpropionate

Magnetic susceptibility, **6**: 363

Ethyl nonylate

Critical temperature, **3**: 249
Heat of vaporization, **5**: 138
Surface tension, **4**: 437, 461

Ethyl oenanthate

Verdet constant, **6**: 430

Ethyl oleate

Surface tension, **4**: 437
-Benzene*
-Ethylene bromide
Density, **3**: 155
-Isoamyl acetate
Viscosity, **5**: 50
-Methyl formate
Density, **3**: 157

Ethyl palmitate, viscosity, **7: 222****Ethyl pelargonate**

Verdet constant, **6**: 430
Viscosity, **7**: 221

Ethyl phenyl ketone

Absorption spectra, **5**: 333, 345
Refractive index, **7**: 46

Ethyl phenylacetate

Absorption spectra, **5**: 346
Dielectric constant, **6**: 95
Refractive index, **7**: 50
Verdet constant, **6**: 430
Viscosity, **7**: 220

Ethyl phenylpropionate

Magnetic susceptibility, **6**: 363
Refractive index, **7**: 53
Surface tension, **4**: 460
Verdet constant, **6**: 430

Ethyl β -phenylpropionate, viscosity, **7: 221****Ethyl phosphate**

Magnetic susceptibility, **6**: 361
Saponification constants, **7**: 137

Ethyl propargyl ether

Absorption spectra, **5**: 332
Refractive index, **7**: 37
Viscosity, **5**: 43; **7**: 216

Ethyl propargyl ether.—(Continued)**-Isoamyl acetate**

Density, **3**: 172
Viscosity, **5**: 43

Ethyl propionate

Absorption spectra, **5**: 332, 338
Azeotropic mixtures, **3**: 320–321
Boiling point, **3**: 220
Compressibility, **3**: 36
Condensation on ions and nuclei, **6**: 117
Critical point data, **3**: 242, 248
Density, **3**: 29, 33
Aqueous solution, **3**: 114
Dielectric constant, **6**: 82, 88
Diffusion of vapor in gases, **5**: 62
Electrical conductivity, **6**: 145
Flash point, **2**: 162
Heat of combustion, **5**: 167
Heat of vaporization, **5**: 137
Orthobaric density, **3**: 242
Refractive index, **7**: 37
Solubility in water, **3**: 388
Specific heat, **5**: 109
Surface tension, **4**: 452
Aqueous solution, **4**: 469
Vapor pressure, **3**: 220
Aqueous solution, **3**: 364
Vapor pressure above 1 atm., **3**: 242
Verdet constant, **6**: 428
Viscosity
Gas, **5**: 4
Liquid, **5**: 28; **7**: 216
-Azobenzene*
-Benzene*
-Benzene*-Chlorobenzene-Toluene
-Benzene*-Toluene
-Chlorobenzene*
-*p*-Dibromobenzene*
-Ethyl acetate*
-Ethyl alcohol*
-Isobutyl formate
Density, **3**: 172
-Isopentane
Density, **3**: 172
-Naphthalene
Density, **3**: 172
-Propyl acetate
Density, **3**: 172
Refractive index, **7**: 83
Dispersion, **7**: 104
-Stannic chloride
Density, **3**: 138
Viscosity, **5**: 28
-Toluene
Surface tension, **4**: 473
-1, 2, 4-Trimethylbenzene
Density, **3**: 172

Ethyl propyl ether

Boiling point, **3**: 220
Critical constant data, **3**: 243, 248
Heat of vaporization, **5**: 137
Orthobaric density, **3**: 243
Refractive index, **7**: 38
Surface tension, **4**: 453
Vapor pressure, **3**: 220
Vapor pressure above 1 atm., **3**: 243
Viscosity, **7**: 217

-Isoamyl acetate

Density, **3**: 173
Viscosity, **5**: 43

Ethyl propyl ketone

Absorption spectra, **5**: 340
Refractive index, **7**: 40
Surface tension, **4**: 436, 455

Ethyl propylacetoacetate

Absorption spectra, **5**: 345
Viscosity, **7**: 220

Ethyl salicylate

Absorption spectra, **5**: 333, 345
Birefringence, electric, **7**: 111

Ethyl salicylate.—(Continued)

Dielectric constant, **6**: 94
Heat of combustion, **5**: 167
Refractive index, **7**: 46
Surface tension, **4**: 459
Verdet constant, **6**: 430
Viscosity, **7**: 220

-Benzene***-Isoamyl acetate**

Density, **3**: 189

-*m*-Xylene

Density, **3**: 191

Ethyl silicate, specific heat, **5: 112****Ethyl stearate, viscosity, **7**: 222****Ethyl succinimide****-*p*-Bromotoluene*****-*p*-Xylene**

Freezing point-solubility, **4**: 144

Ethyl sulfine

Magnetic susceptibility, **6**: 361

Ethyl tetracetylquinat

Refractive index, **7**: 30

Ethyl thiobenzoate, viscosity, **7: 220****Ethyl thiocyanate**

Dielectric constant, **6**: 85
Electrical conductivity, **6**: 143
Heat of combustion, **5**: 169
Surface tension, **4**: 449
Viscosity, **5**: 39; **7**: 214

-Piperidine

Density, **3**: 162

Viscosity, **5**: 39

-Tetraethylammonium iodide

Density, **3**: 162

Ethyl toluate (*o*-, *m*-, *p*-)

Refractive index, **7**: 50, 51
Verdet constant, **6**: 430

Ethyl *o*-toluylethylcarbamate**-Nitrocellulose**

Density, **3**: 196

Ethyl tribromoacetate

Birefringence, magnetic, **7**: 111
Magnetic susceptibility, **6**: 361

Ethyl trichloroacetate

Absorption spectra, **5**: 336
Birefringence, electric, **7**: 111
Dielectric constant, **6**: 86
Diffusion in methyl alcohol, **5**: 72
Electrical conductivity, **6**: 143
Magnetic susceptibility, **6**: 361
Refractive index, **7**: 35
Specific heat, **5**: 108
Surface tension, **4**: 450

-Benzene***-Ethyl acetate*****-Ethyl alcohol*****-Ethyl ether*****-Ethylene bromide**

Density, **3**: 155

-Hexane

Density, **3**: 165

-Methyl benzoate

Density, **3**: 165

-Methyl formate

Density, **3**: 157

-Nitrobenzene

Density, **3**: 165

-Phenanthrene

Density, **3**: 165

Ethyl valerate

Birefringence, electric, **7**: 111
Compressibility, **3**: 37
Critical temperature, **3**: 249
Dielectric constant, **6**: 92
Diffusion of vapor in gases, **5**: 62
Electrical conductivity, **6**: 145
Heat of combustion, **5**: 167
Heat of vaporization, **5**: 137
Specific heat, **5**: 111
Thermal conductivity, **5**: 228
Viscosity, **7**: 219

* Data for system will be found under this compound in Index. Full explanation on page vii.

Ethyl valerate.—(Continued)

-Benzene*

-Xylene

Density, **3**: 190**Ethyl xanthate**Absorption spectra, **5**: 338Electrical conductivity, **6**: 143**Ethylacetanilide**Crystallography, **1**: 330Surface tension, **4**: 460

-Acetone*

-Benzene*

-Chloroform*

-Ethyl alcohol*

-Ethyl ether*

Ethylacetone, diffusion in free air, **1**: 358**1-Ethyl-4-acetylnaphthalene**

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107**Ethylamine**Absorption spectra, **5**: 331, 335Boiling point, **3**: 217Critical point data, **3**: 239, 248Density, **3**: 28, 33Dielectric constant, **6**: 82, 85Electrical conductivity, **6**: 143Aqueous solution, **6**: 263Freezing point lowering of aqueous solution, **4**: 262Heat of combustion, **5**: 167Heat of formation, **5**: 182Heat of solution in water, **5**: 148Heat of vaporization, **5**: 137Solubility in water, **3**: 261Surface tension, **4**: 442, 449Thermal conductivity, **5**: 214, 215Vapor pressure, **3**: 217Vapor pressure above 1 atm., **3**: 239Viscosity, **7**: 214

-Barium thiocyanate*

-Chloroform*

-Ethyl ether*

-Ethylammonium chloride

Density, **3**: 162Viscosity, **5**: 39

-Silver nitrate

Density, **3**: 139Viscosity, **5**: 28

-Toluene

Distribution coefficients in water, **3**: 425

-Xylene

Distribution coefficients in water, **3**: 425

-Zinc hydroxide

Solubility in water, **7**: 255**Ethylaminonaphthalene** (α -, β -)

-Quinoline

Density, **7**: 87Refractive index, **7**: 87Dispersion, **7**: 106**Ethylammonium bromide**Transition temperature, **4**: 8**Ethylammonium chloride**Density, aqueous solution, **3**: 62, 112, 113Electrical conductivity, **6**: 147Aqueous solution, **6**: 243Heat of solution in water, **5**: 148Transition temperature, **4**: 8Viscosity, aqueous solution, **5**: 13

-Ethylamine*

-Sulfur dioxide

Boiling point elevation, **3**: 328**Ethylammonium nitrate**Electrical conductivity, **6**: 147Surface tension, **4**: 449**Ethylammonium sulfate**Diffusion in methyl alcohol, **5**: 72**Ethylaniline**Absorption spectra, **5**: 333, 344Azeotropic mixtures, **3**: 322Boiling point, **3**: 225Compressibility, **3**: 37Dielectric constant, **6**: 94Heat of combustion, **5**: 168Magnetic susceptibility, **6**: 363Refractive index, **7**: 43Surface tension, **4**: 458Vapor pressure, **3**: 225Verdet constant, **6**: 429Viscosity, **7**: 219

-Nitrobenzene

Density, **3**: 177Heat of solution, **5**: 157Specific heat, **5**: 128Surface tension, **4**: 473Viscosity, **5**: 45**Ethylaniline hydrochloride**

-Chloroform*

Ethylaniline hydroiodideCrystallography, **1**: 328

-Chloroform*

EthylbenzeneAbsorption spectra, **5**: 333, 343Azeotropic mixtures, **3**: 319-322Birefringence, **7**: 111Boiling point, **3**: 224Compressibility, **3**: 37, 39Dielectric constant, **6**: 93Diffusion of vapor in air, **5**: 62Flash point, **2**: 161Heat of combustion, **5**: 163Heat of vaporization, **5**: 137Photoluminescence, **5**: 387Polarization of light scattered by, **5**: 267Refractive index, **7**: 43Sound, velocity of, in, **6**: 464Specific heat, **5**: 111Surface tension, **4**: 437, 457Vapor pressure, **3**: 224Verdet constant, **6**: 429Viscosity, **7**: 219

-Antimony tribromide*

-Antimony trichloride*

-Benzene*

-Ethyl acetate*

-Hydrogen bromide

Freezing point-solubility, **4**: 187

-Isobutyl formate

Density, **3**: 172

-Resorcinol

Solubility, mutual, **3**: 397

-Toluene

Density, **3**: 187Vapor pressure, **3**: 289

-Trimethylbenzene

Density, **3**: 191-Xylene (*o*-, *m*-, *p*-)Refractive index, **7**: 86Dispersion, **7**: 106**o-Ethylbenzoic acid**Electrical conductivity, aqueous solution, **6**: 291Refractive index, **7**: 46

-Quinoline

Density, **7**: 87Refractive index, **7**: 87Dispersion, **7**: 106**Ethylbenzylaniline**, viscosity, **7**: 221**Ethylcamphor**Optical rotatory power, **7**: 436Refractive index, **7**: 58**9-Ethyl-10-chloroanthracene**

-Quinoline

Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 108**Ethylcoumarinic acid**Electrical conductivity, aqueous solution, **6**: 297Heat of combustion, **5**: 166**1-Ethyl-1-cyclohexene**Heat of combustion, **5**: 163**1-Ethylcyclopentan-2-ol**Heat of combustion, **5**: 164**1-Ethyl-5-dimethylcyclohexene**Heat of combustion, **5**: 164**Ethyldimethylcarbinol**Verdet constant, **6**: 429**Ethyldipropylcarbinol**Heat of combustion, **5**: 164**Ethylene**Absorption spectra, **5**: 331, 335Adsorption by wood charcoal, **3**: 250Boiling point, **3**: 216, 230Compressibility, **3**: 14Liquid, **3**: 38Critical point data, **3**: 230, 248Critical potentials, **6**: 72Decomposition pressure of hydrate, **7**: 245Density, gas, **3**: 3Detonation, **2**: 185Dielectric constant, **6**: 82Electrons, absorption of, by, **6**: 61Electrons, attachment of, to form ions, **6**: 117Explosion in closed vessels, **2**: 191Flame propagation in, **2**: 184Heat of combustion, **5**: 163Heat of decomposition of hydrate, **7**: 245Heat of formation, **5**: 181Ignition temperature, **2**: 173Inflammability, limits of, **2**: 179Ionization by α -particles, **6**: 122Ions, mobility of, in, **6**: 111Magnetic susceptibility, **6**: 361Orthobaric density, **3**: 230Polarization of light scattered by, **5**: 265Refractivity, **7**: 10Solubility in aqueous solutions, **3**: 280Solubility in non-aqueous liquids, **3**: 269Solubility in water, **3**: 260Sound, velocity of, in, **6**: 463Specific heat, gas, **5**: 80, 81Thermal conductivity, **5**: 214, 215Vapor pressure, **3**: 216Vapor pressure above 1 atm., **3**: 230Verdet constant, **6**: 425Viscosity, gas, **5**: 3

-Air*

-Ammonia*

-Argon*

-Carbon monoxide*

-Hydrogen

Detonation, **2**: 186Diffusion coefficient, **5**: 62Viscosity, **5**: 5

-Methane

Boiling point elevation, **3**: 333

-Methyl ether

Freezing point-solubility, **4**: 107Vapor pressure, **3**: 287

-Oxygen

Boiling point elevation, **3**: 325*P-V-T* relations, **3**: 17**Ethylene bromide**Absorption spectra, **5**: 331Azeotropic mixtures, **3**: 318-319Birefringence, **7**: 110Boiling point, **3**: 216, 335Compressibility, **3**: 35Cryoscopic constant, **4**: 183, 215

Ethylene chloride.—(Continued)

Ethylene chloride: (Continued)
-*Ethylene bromide**
-*Iodine*
Boiling point elevation, **3**: 335
-*Naphthalene*
Freezing point-solubility, **4**: 173
-*Sulfur*
Freezing point-solubility, **4**: 35
-*Toluene*
Heat of solution, **5**: 156
Ethylene cyanide
Dielectric constant, **6**: 86
Refractive index, **7**: 35
-*Isobutyl alcohol*
Solubility, mutual, **3**: 397
Ethylene dichloroacetate
Specific heat, **5**: 110
Ethylene glycol
Density, aqueous solution, **3**: 112
-*Potassium iodide*
Density, **3**: 142
-*Potassium sulfate*
Freezing point-solubility in water, **4**: 411
Ethylene glycol butyl ether
Solubility in water, **3**: 390
Ethylene glycol diacetate
Density, aqueous solution, **3**: 114
Ethylene glycol isobutyl ether
Solubility in water, **3**: 390
Ethylene iodide
Absorption spectra, **5**: 335
Diffusion in benzene, **5**: 74
Diffusion in methyl alcohol, **5**: 72
Magnetic susceptibility, **6**: 361
Ethylene oxide
Boiling point, **3**: 216
Critical temperature, **3**: 248
Density, **3**: 28
Dielectric constant, **6**: 84
Freezing point lowering of aqueous solution, **4**: 262
Heat of vaporization, **5**: 136
Phenols, addition of, kinetics, **7**: 124
Refractive index, **7**: 34
Surface tension, **4**: 441
Vapor pressure, **3**: 216
Viscosity, **7**: 213
Ethylenebromohydrin, refractive index, aqueous solution, **7**: 67
Ethylenechlorohydrin
Dielectric constant, **6**: 85
Ethylenecyclohexane
Heat of combustion, **5**: 163
Ethylenediamine
Absorption spectra, **5**: 331
Dielectric constant, **6**: 85
Electrical conductivity, aqueous solution, **6**: 263
Heat of combustion, **5**: 167
Heat of solution in water, **5**: 148
Refractive index, **7**: 34
Viscosity, **7**: 214
Ethylenediamine hydrochloride
Absorption spectra, ultra-violet, **5**: 370
Crystallography, **1**: 324
Heat of solution in water, **5**: 148
-*Ammonia**
Ethylenediamine sulfate
Optical rotatory power, **7**: 354
Ethylformanilide, viscosity, **7**: 220
 β -Ethylgalactoside
Synthesis by enzymes, **7**: 156
3-Ethylhexane
Compressibility, **3**: 37
Heat of combustion, **5**: 163
Ethylhexylcarbinol
Verdet constant, dispersion of, **6**: 434

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Ethylhydroanthranol**
-*Quinoline*
Density, 7: 88
Refractive index, 7: 88
Dispersion, 7: 108
- Ethylhydroxylamine**
Magnetic susceptibility, 6: 361
Refractive index, 7: 34
- Ethylidene chloride**
Dielectric constant, 6: 84
Heat of combustion, 5: 168
Heat of vaporization, 5: 136
Magnetic susceptibility, 6: 361
-*Diethyl tartrate**
- Ethylisopropylcarbinol**, viscosity, 7: 218
- Ethylmalonic acid**
Decomposition, kinetics of, 7: 122
Electrical conductivity, aqueous solution, 6: 270
Heat of combustion, 5: 165
- Ethylmercaptan**
Absorption spectra, 5: 331
Boiling point, 3: 217, 338
Critical point data, 3: 239, 248
Density, 3: 28
Dielectric constant, 6: 85
Heat of combustion, 5: 169
Orthobaric density, 3: 239
Refractive index, 7: 34
Surface tension, 4: 436, 449
Vapor pressure, 3: 217
Vapor pressure above 1 atm., 3: 239
Viscosity, 5: 37; 7: 214
-*Ethyl alcohol**
- Ethylmercaptan-ammonia**
Vapor pressure, 3: 209
- Ethylmercuric chloride**
Absorption spectra, solutions, 5: 328
- Ethylmercuric iodide**
Absorption spectra, solutions, 5: 328
- Ethylmethyldiazoles**
Refractive index, 7: 50
- 3-Ethylpentane**, heat of combustion, 5: 163
- Ethylphenylammonium chloride**
Boiling point elevation in aqueous solution, 3: 327
-*Ethyl alcohol**
-*Isoamyl alcohol*
Boiling point elevation, 3: 343
- Ethylphenylhydrazine hydrochloride**
-*Chloroform**
- Ethylphenylurethan**, viscosity, 7: 221
- 1-Ethylpiperidine**
Solubility in water, 3: 391
- Ethylpropylacetic acid**, heat of combustion, 5: 165
- Ethylpropylacetone**, viscosity, 7: 220
- Ethylpropylamine**, viscosity, 7: 217
- p-Ethylpropylazophenol**
-*p-Methylpropylazophenol*
Freezing point-solubility, 4: 165
- Ethylpropylmalonic acid**
Heat of combustion, 5: 165
- N-Ethylquinoline iodide**
Boiling point elevation in aqueous solution, 3: 327
-*Ethyl alcohol**
- Ethylresodiacetophenone**
-*Benzene**
- Ethylsilicochloroform**
Magnetic susceptibility, 6: 356
- β -Ethylstyrene**, heat of combustion, 5: 163
- Ethylsuccinic acid**
Electrical conductivity, aqueous solution, 6: 275
Heat of combustion, 5: 165
- Ethylsuccinic anhydride**
Heat of combustion, 5: 166
- Ethylsuccinimide**
Magnetic susceptibility, 6: 362
- Ethylsulfone ethyl ether**
Magnetic susceptibility, 6: 361
- Ethylsulfuric acid**
Heat of solution in water, 5: 148
- p-Ethyltoluene**, surface tension, 4: 459
- Ethyltoluidine** (*o*-, *p*-), viscosity, 7: 220
- Ethyl-o-tolylurethan**, viscosity, 7: 221
- Ethyltrimethyllead**
Boiling point, 1: 116, 163
Density, 1: 116
Refractive index, 1: 116, 165
- Ethyltripropylammonium iodide**
-*Dichloromethane**
- Ethylurea**
Crystallization velocity, 5: 61
Heat of combustion, 5: 167
Heat of solution in water, 5: 148
- Ethylurethan**
Cryoscopic constant, 4: 215
Solubility of salts in, 4: 210
Surface tension, 4: 452
- α -Ethylvaleric acid**, viscosity, 7: 219
- Ethylvinylcarbinol**
Heat of combustion, 5: 164
- Ethylxanthic acid**
-*Amyl alcohol**
-*Benzyl alcohol**
-*Carbon disulfide**
-*Chloroform**
-*Nitrobenzene*
Distribution coefficients in water, 3: 428
- Ettingshausen effect**, 6: 415
Coefficient of, conversion factors, 1: 30
- Ettringite**
Density, 1: 145
Refractive index, 1: 145, 166
- Eucalyptol**
Absorption spectra, 5: 333
Magnetic susceptibility, 6: 363
- Eucalyptus bark fiber**
Thermal conductivity, 2: 313
- Euchroite**
Density, 1: 123
Refractive index, 1: 123, 172
- Euclase**
Density, 1: 141
Refractive index, 1: 141, 172; 7: 23
- Eucryptite**
Density, 1: 150
Melting point, 1: 150
Refractive index, 1: 150, 166
- Eucupine dihydrochloride**
Absorption spectra, ultra-violet, 5: 370, 372
- Eucupinotoxine hydrochloride**
Absorption spectra, ultra-violet, 5: 370
- Eudesmene**, optical rotatory power, 7: 461
- Eudialyte**
Refractive index, 7: 27
Thermal conductivity, 5: 232
- Eudidymite**
Density, 1: 153
Refractive index, 1: 153, 169
- Eugenol**
Absorption spectra, 5: 333, 346
Birefringence, magnetic, 7: 111
Dielectric constant, 6: 95
Diffusion in free air, 1: 358
Diffusion of vapor in air, 5: 63
Electrical conductivity, 6: 144
Magnetic susceptibility, 6: 363
Refractive index, 7: 50
Verdet constant, 6: 430
Viscosity, 7: 220, 223
-*Isoamyl acetate*
Density, 3: 190
Viscosity, 5: 50
- Eugenol benzoate**
-*Isoeugenol benzoate*
Freezing point-solubility, 4: 165
- Eulytite**
Density, 1: 113
Refractive index, 1: 113, 165
- Euphorbone**, optical rotatory power, 7: 465
- Eureka alloy**
Electrical conductivity, magnetic field, effect of, 6: 422
- Europium**
Cathodoluminescence, 5: 388
Emission spectra, 5: 292
Persistent lines, 5: 323
X-ray absorption limits, 6: 39
X-ray emission spectra, 6: 39
X-ray series, limiting frequencies, 6: 35
- Europium ethyl sulfate**
Density, 1: 140
Refractive index, 1: 140, 166
- Europium nitrate**
Absorption spectra, solutions, 5: 329
- Eutectic** (fusible alloys), 2: 376
- Eutectoid alloy**, electrical conductivity, 6: 178
- Euxanthic acid**
Optical rotatory power, 7: 397
-*Pyridine*
Boiling point elevation, 3: 342
- Evaporation**
Aperture, rate through, 5: 53
In gas current, formula for, 5: 54
in vacuo, formula for, 5: 53
Oxides in tungsten, 6: 55
Small drops, 5: 53
Still air, equations for, 5: 54
- Everbrite** (alloy), 2: 376
- Everdur metal**, 2: 376; cf. 554
- Ex.B metal**, 2: 376; cf. 562
- Ex.K metal**, 2: 376; cf. 562
- Excello** (alloy), 2: 376; cf. 467, 480
Electrical conductivity, 6: 193, 194
- Excelsior** (alloy), 2: 376; cf. 480, 601
Electrical conductivity, 6: 169
- Excitation voltage**, 6: 27
- Expansion**, adiabatic, heat of, 5: 146
- Expansivity**, definition, 1: 36
- Explosion vessel**, 2: 193
- Explosions**, 2: 172
- Explosions, gaseous**
Heat loss in, 2: 194
Radiation losses in, 2: 193
Turbulence, effect of, 2: 195
- Explosives**
Blasting, 7: 493
Commercial, 7: 489
Compositions of typical, 7: 494
Detonation velocity, 7: 492
Fall-hammer test, 7: 491
Gaseous, 2: 162, 172
Heat of explosion, 7: 490
Lead-block test, 7: 491
Propulsive, 7: 495
Sound, source of, 6: 456
Tests for, 7: 489
Trauzl lead-block test, 7: 490
- Extension**, elastic, heat of, 5: 147
- Extinction coefficient**. *See* Absorption, index of.
- Extra Prima alloy**, electrical conductivity, 6: 196
- Eye**, sensitivity of, 1: 92
- Eye protection**, filters for, 5: 272
- Factors, conversion**, 1: 18
- Fagersta steel**
Electrical conductivity, 6: 182
- Fahlun brilliants** (alloy), 2: 376; cf. 467, 557
- Fahrenheit**, definition, 1: 36
- Fahrig antifriction** (alloy), 2: 376; cf. 561
- Fahrte** (alloy), 2: 376; cf. 508
- Faience**. *See* Porcelain.
- Fall-hammer test** (explosives), 7: 489

* Data for system will be found under this compound in Index. Full explanation on page vii.

Fairfieldite

Density, 1: 144
Refractive index, 1: 144, 171

Farad, definition, 1: 36**Faraday**

Definition, 1: 36

Value of, 1: 17

Faraday effect, 6: 434**Faradiol**, optical rotatory power, 7: 464**Fatigue**, metals and alloys, 2: 595**Fatigue resistance**, definition, 2: xii**Fatigue strength**, definition, 2: xii**Fats**, 2: 196

Acetyl value, 2: 214

Density, 2: 214

Ethyl alcohol, miscibility of, in water, 3: 401

Hehner value, 2: 215

Hydrolysis, enzymatic, 7: 153

Iodine value, 2: 214

Melting points, 2: 210, 214

Reichert-Meissl value, 2: 215

Saponification value, 2: 214; 7: 135

Specific heat, 2: 210

Thermal expansion, 2: 210

Unsaponifiable matter, 2: 215

Viscosity, 2: 209

Fats, animal

Composition, 2: 208

Dispersion, optical, 2: 214

Electrical conductivity, 2: 211

Fatty acids of, melting points, 2: 215

Flash point, 2: 211

Heat of combustion, 2: 211

Properties, 2: 205

Fats, vegetable

Composition, 2: 207

Dispersion, optical, 2: 214

Electrical conductivity, 2: 211

Fatty acids of, melting points, 2: 215

Polenske values, 2: 208

Properties, 2: 203

Refractive index, 2: 213

Faujasite

Density, 1: 154

Refractive index, 1: 154, 165

Fayalite

Melting point, 1: 129

Refractive index, 1: 129, 173

Feathers, moisture content at various humidities, 2: 316**Feldspar**

Electrical conductivity, X-rays, effect of, 6: 6

Refractive index, 7: 27

Felsite

Bulk density, 2: 53

Compressive strength, 2: 47

Felsoebanyite

Density, 1: 137

Refractive index, 1: 137, 169

Felt, asphalt

Density, 2: 313

Thermal conductivity, 2: 313

Felt, fire. *See* Asbestos.**Felt, hair**

Density, 2: 313

Thermal conductivity, 2: 313

Felt, wood

Density, 2: 313

Thermal conductivity, 2: 313

Felt, wool

Density, 2: 313

Thermal conductivity, 2: 313

Felts

Acoustic absorption, 6: 460

Heat conductivity, 2: 238

Fenchane, heat of combustion, 5: 164**Fenchene**, optical rotatory power, 7: 411**Fencholenic acid**

Electrical conductivity, aqueous solution, 6: 296

Optical rotatory power, 7: 415

 β -Fencholenic acid

Optical rotatory power, 7: 415, 433

Fenchone

Absorption spectra, 5: 347

Boiling point, 3: 347

Cryoscopic constant, 4: 184

Optical rotatory power, 7: 435

Refractive index, 7: 52

-*Anthracene**

-*Anthraquinone**

-*Antimony triiodide**

-*Arsenous iodide**

-*Arsenous oxide**

-*Benzil**

-*Bismuth iodide**

-*Carbazole**

-*Catechol**

-*2, 4-Dinitrophenol**

-*Hydroquinol*

Freezing point-solubility, 4: 140

-*Mercuric bromide*

Boiling point elevation, 3: 347

-*Mercuric chloride*

Boiling point elevation, 3: 347

-*Mercuric iodide*

Boiling point elevation, 3: 347

-*Naphthol* (α -, β -)

Freezing point-solubility, 4: 156

-*Nitrophenol* (*o*-, *p*-)

Freezing point-solubility, 4: 129, 132

-*Phenol*

Freezing point-solubility, 4: 137

-*Picric acid*

Freezing point-solubility, 4: 121

-*Pyrogallol*

Freezing point-solubility, 4: 141

-*Resorcinol*

Freezing point-solubility, 4: 139

-*Sulfur*

Boiling point elevation, 3: 347

Fenchyl alcohol

Optical rotatory power, 7: 453

Fenchyl chloride

Optical rotatory power, 7: 453

Fenchylamine

Optical rotatory power, 7: 456

Fenton's alloy, 2: 376**Ferberite**

Density, 1: 134

Refractive index, 1: 134, 174

Fermet (alloy), 2: 376**Ferric acetate**, heat of formation, 5: 191**Ferric bromide**

Absorption spectra, solutions, 5: 327

Ammine

Decomposition pressure, 7: 278

Heat of decomposition, 7: 278

Density, aqueous solution, 3: 68

Heat of formation, 5: 191

Magnetic susceptibility, 6: 357

Aqueous solution, 6: 364

Ferric carbonylferrocyanide, heat of formation, 5: 191**Ferric chlorate**, heat of formation, 5: 191**Ferric chloride**

Absorption spectra, solutions, 5: 327

Ammine, decomposition pressure, 7: 277

Decomposition pressure, 7: 277

Hydrate, 7: 277

Density, aqueous solution, 3: 68, 104

Electrical conductivity, aqueous solution, 6: 231, 233

Freezing point lowering of aqueous solution, 4: 256

Heat of formation, 5: 191

Magnetic susceptibility, 6: 357

Aqueous solution, 6: 364

Ferric chloride.—(Continued)

Photoelectric current, 6: 68

Refractive index, aqueous solution, 7: 70

Dispersion, 7: 100

Solubility in water, 4: 224, 246

Specific heat, aqueous solution, 5: 123

Surface tension, aqueous solution, 4: 465

Transference number, 6: 311

Vapor pressure, 3: 208

Aqueous solution, 3: 367

Verdet constant, aqueous solution, 6: 426, 428

Viscosity, aqueous solution, 5: 14

X-rays, absorption coefficient, 6: 13

See also Molysite.

-*Acetic acid**

-*Acetone**

-*Ammonium chloride**

-*Aniline hydrochloride**-*Hydrogen chloride*

-*Arsenous bromide**

-*Barium sulfate**

-*Bismuth chloride**

-*Cesium chloride**

-*Chloroform**

-*Cuprous chloride**

-*Ethyl alcohol**

-*Ethyl ether**

-*Ferric nitrate*-*Ferric sulfate*

Refractive index, aqueous solution, 7: 98

-*Ferric oxide*

Freezing point-solubility in water, 4: 309

Vapor pressure, 3: 358

-*Hydrogen chloride*

Density, aqueous solution, 3: 95

Freezing point-solubility in water, 4: 308, 309, 386

Viscosity, aqueous solution, 5: 18

-*Lead chloride*

Freezing point-solubility, 4: 51

-*Magnesium sulfate*

Density, aqueous solution, 3: 98

-*Methyl alcohol*

Magnetic susceptibility, 6: 364

Verdet constant, 6: 427

-*Nickel chloride*

Refractive index, aqueous solution, 7: 96

-*Potassium chloride*

Freezing point-solubility in water, 4: 309

-*Pyridine*

Boiling point elevation, 3: 342

-*Sodium chloride*

Freezing point-solubility in water, 4: 309

-*Thallium monochloride*

Freezing point-solubility, 4: 53; 7: 320

-*Zinc chloride*

Freezing point-solubility, 4: 54

Ferric ferrocyanide

Heat of formation, 5: 191

Ferric fluoride

Dielectric constant, 6: 76

Freezing point lowering of aqueous solution, 4: 256

Heat of formation, 5: 191

Magnetic susceptibility, 6: 357

-*Sodium fluoride*

Freezing point-solubility, 4: 60

Ferric hydroxide

Density, aqueous solution, 3: 68

Heat of formation, 5: 191

Magnetic susceptibility, 6: 357

Ferric iodide

Heat of formation, 5: 191

-*Iodine*

Boiling point elevation, 3: 325

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Ferric ion**
 Arsenous acid, reaction with, 7: 277
 Free energy, 7: 277
 Silver, reaction with, 7: 277
- Ferric metasilicate**, specific heat, 5: 98
- Ferric nitrate**
 Absorption spectra, solutions, 5: 327
 Density, aqueous solution, 3: 68
 Diffusion in water, 5: 65
 Electrical conductivity, aqueous solution, 6: 237, 240
 Freezing point lowering of aqueous solution, 4: 256
 Heat of formation, 5: 191
 Magnetic susceptibility, 6: 358
 Aqueous solution, 6: 364
 Refractive index, aqueous solution, 7: 71
 Dispersion, 7: 100
 -Cobaltous nitrate*
 -Ferric chloride*-Ferric sulfate
 -Ferric sulfate
 Refractive index, aqueous solution, 7: 96
- Ferric oleate**, dielectric constant, 6: 97
- Ferric oxalate**
 Density, aqueous solution, 3: 68
 Heat of formation, 5: 191
 Surface tension, aqueous solution, 4: 465
 -Ferrous oxalate-Potassium oxalate
 Freezing point-solubility in water, 4: 372
- Ferric oxide**
 Compressibility, 3: 50
 Decomposition pressure, 7: 279
 Electrical conductivity, 6: 153, 154, 155
 Electrons, thermal emission of, 6: 54
 Emission, spectral, 5: 257, 258
 Heat of formation, 5: 191
 Magnetic susceptibility, 6: 357
 Melting point, 4: 84
 Photoelectric current, 6: 68
 Specific heat, 5: 97
 Sulfur trioxide complexes, refractive index, 7: 21
 Thermal conductivity, 5: 216, 217, 221, 232
 Thermionic work function, 6: 54
 Thermoelectric power, 6: 224
 Transformation temperature, 4: 84
 X-ray diffraction data, 1: 342
 See also Hematite.
 -Aluminum oxide*
 -Aluminum oxide*-Calcium oxide
 -Calcium oxide*
 -Ferric chloride*
 -Ferro-ferric oxide
 Freezing point-solubility, 4: 85, 87
 -Lead oxide
 Density, 3: 134
 Freezing point-solubility, 4: 85
 -Nitric acid
 Freezing point-solubility in water, 4: 362, 392
 -Phosphoric acid
 Freezing point-solubility in water, 4: 369, 392
 -Sulfuric acid
 Freezing point-solubility in water, 4: 344, 390
- Ferric oxide gels**, adsorption on, 3: 252
- Ferric phosphate**
 -Phosphoric acid
 Density, aqueous solution, 3: 97
- Ferric phosphide**
 Transition temperature, 4: 7
- Ferric potassium chloride**
 Ammine, decomposition pressure, 7: 308
- Ferric potassium sulfate**
 Density, 1: 157
 Aqueous solution, 3: 92
 Refractive index, 1: 157, 168; 7: 13
- Ferric potassium sulfate**.—(Continued)
 -Aluminum potassium sulfate*
- Ferric rubidium selenate**
 Density, 1: 160
 Refractive index, 1: 160, 165
- Ferric rubidium sulfate**
 Decomposition pressure of hydrate, 7: 309
 Density, 1: 160
 Aqueous solution, 3: 94
 Refractive index, 1: 160, 165
 Solubility in water, 4: 243
- Ferric sulfate**
 Absorption spectra, solutions, 5: 327
 Ammine
 Decomposition pressure, 7: 279
 Heat of decomposition, 7: 279
 Compressibility, aqueous solution, 3: 439
 Decomposition pressure, 7: 279
 Density, 3: 44
 Aqueous solution, 3: 68
 Heat of formation, 5: 191
 Magnetic susceptibility, 6: 357
 Aqueous solution, 6: 364
 Reflectivity, selective, 5: 260
 Refractive index, aqueous solution, 7: 71
 Solubility in sulfuric acid, 4: 43
 Verdet constant, aqueous solution, 6: 428
 -Aluminum sulfate*
 -Ferric chloride*-Ferric nitrate
 -Ferric nitrate*
 -Manganous sulfate
 Refractive index, aqueous solution, 7: 96
 -Potassium sulfate
 Surface tension, aqueous solution, 4: 470
 -Sulfur trioxide
 Freezing point-solubility in water, 4: 343, 390
 -Sulfuric acid
 Density, aqueous solution, 3: 96
- Ferric thiocyanate**
 -Ethyl ether*
- Ferrinatrite**
 Density, 1: 152
 Refractive index, 1: 152, 166
- Ferrite**, electrical conductivity, 6: 182
- Ferritungstite**, refractive index, 1: 134, 167
- Ferrocupralium**, 2: 376
- Ferro-ferric oxide**
 Carbon monoxide, reaction with, 7: 279
 Decomposition pressure, 7: 279
 Electrical conductivity, 6: 154
 Emission, spectral, 5: 242, 258
 Heat of formation, 5: 191
 Heat of transition, 5: 191
 Magnetic properties, 6: 413
 Melting point, 4: 84
 Reduction with hydrogen, 7: 279
 Specific heat, 5: 98
 Thermoelectric power, 6: 224
 X-ray diffraction data, 1: 342
 See also Magnetite.
 -Ferric oxide*
 -Ferrous oxide
 Freezing point-solubility, 4: 85
- Ferro-ferricyanide electrode**
 Potential of, 7: 309
- Ferromagnetism**, 6: 366
- Ferronickel**, electrical conductivity, 6: 185
- Ferromanganese**, specific heat, 5: 119
- Ferronickel**
 Specific heat, 5: 119
 Thermal conductivity, 5: 225
- Ferroniobite**
 Density, 1: 135
 Refractive index, 1: 135, 174
- Ferrosilicon**
 Thermal expansion, 2: 467, 473
- Ferrous acetate**
 Absorption spectra, solutions, 5: 327
- Ferrous benzoate**
 Ammine, decomposition pressure, 7: 279
- Ferrous bicarbonate**
 Free energy of ionization, 7: 278
- Ferrous bromide**
 Ammines
 Decomposition pressure, 7: 277
 Heat of decomposition, 7: 277
 Density, aqueous solution, 3: 68
 Decomposition pressure of hydrates, 7: 277
 Electrical conductivity, aqueous solution, 6: 234, 239
 Heat of formation, 5: 191
 Methylamine complex
 Decomposition pressure, 7: 278
 Heat of decomposition, 7: 278
 Refractive index, aqueous solution, 7: 70
 Dispersion, 7: 100
 Solubility in water, 4: 224
 -Aluminum bromide*
- Ferrous carbonate**
 Compressibility, 3: 50
 Decomposition pressure, 7: 278
 Emission spectra, 5: 259
 Heat of formation, 5: 191
 Reflectivity, selective, 5: 260
 Solubility in carbonic acid, 7: 278
 Free energy and heat of solution, 7: 278
 Specific heat, 5: 98
 Thermal conductivity, 5: 232
 Thermal expansion, 3: 44
 X-ray diffraction data, 1: 343
- Ferrous chloride**
 Absorption spectra, solutions, 5: 327
 Activity coefficient in water, 7: 277
 Ammines
 Decomposition pressure, 7: 277
 Heat of decomposition, 7: 277
 Heat of formation, 5: 191
 Decomposition pressure of hydrate, 7: 277
 Density, aqueous solution, 3: 68
 Diffusion in water, 5: 65
 Electrical conductivity, aqueous solution, 6: 231, 233
 Freezing point lowering of aqueous solution, 4: 256
 Heat of formation, 5: 191
 Magnetic susceptibility, 6: 357
 Aqueous solution, 6: 364
 Methylamine complex
 Decomposition pressure, 7: 277
 Heat of decomposition, 7: 277
 Photoelectric current, 6: 68
 Refractive index, aqueous solution, 7: 70
 Dispersion, 7: 100
 Solubility in water, 4: 224
 Transference number, 6: 311
 Vapor pressure, 3: 208
 Vapor pressure lowering in aqueous solution, 3: 294
 Verdet constant, aqueous solution, 6: 426
 See also Lawrencite.
 -Ammonium chloride*
 -Bismuth chloride*
 -Cuprous chloride*
 -Magnesium chloride-Potassium chloride
 Freezing point-solubility in water, 4: 308, 386
 -Pyridine
 Boiling point elevation, 3: 342
- Ferrous fluoride**, heat of formation, 5: 191

Ferrous fluosilicate

Refractive index, 1: 129, 166; 7: 22

Ferrous hydroxide

Heat of formation, 5: 191

Ferrous iodide**Ammine**

Decomposition pressure, 7: 278

Heat of decomposition, 7: 278

Decomposition pressure of hydrate, 7: 278

Heat of formation, 5: 191

Magnetic susceptibility, 6: 357

Aqueous solution, 6: 364

Methylamine complex

Decomposition pressure, 7: 278

Heat of decomposition, 7: 278

Ferrous ion, bicarbonate ion, free energy and heat of reaction, 7: 278**Ferrous manganous tungstate**

Specific heat, 5: 98

Ferrous metasilicate

Heat of formation, 5: 191

See also Gruenerite.*-Calcium metasilicate****Ferrous metatitanate.** *See* Ilmenite.**Ferrous methylamine sulfate, decomposition pressure of hydrate, 7: 278****Ferrous naphthalenesulfonate**

Ammine, decomposition pressure, 7: 279

Ferrous nitrate

Density, aqueous solution, 3: 68, 104

Freezing point lowering of aqueous solution, 4: 256

Heat of formation, 5: 191

Solubility in water, 4: 225

Ferrous oxalate

Refractive index, 7: 22

Thermal conductivity, 5: 216

-Ferric oxalate-Potassium oxalate***Ferrous oxide**

Brightness temperature, 5: 245

Carbon dioxide, reaction with, 7: 279

Carbon monoxide, reaction with, 7: 277

Dielectric constant, 6: 76

Heat of formation, 5: 191

Melting point, 4: 84

Photoelectric current, 6: 68

Radiation temperature, total, 5: 246

Reduction with hydrogen, 7: 277

Thermal conductivity, 5: 216

Thermoelectric power, 6: 224

X-ray diffraction data, 1: 342

Water vapor, reaction with, 7: 279

-Calcium oxide-Silica**-Carbon dioxide***-Ferro-ferric oxide***-Magnesium oxide-Silica*

Freezing point-solubility, 4: 92

-Manganese oxide-Silica

Freezing point-solubility, 4: 92

-Phosphoric acid

Freezing point-solubility in water, 4: 369

-Silica

Freezing point-solubility, 4: 85

-Sulfuric acid

Freezing point-solubility in water, 4: 342, 390

Ferrous phosphide

Transition temperature, 4: 7

Ferrous potassium selenate

Refractive index, 7: 31

Ferrous potassium sulfate

Density, 1: 157

Heat of formation, 5: 206

Hydrate

Decomposition pressure, 7: 308

Heat of decomposition, 7: 308

Refractive index, 1: 157, 165; 7: 31

Solubility in water, 4: 241

Ferrous rubidium selenate

Refractive index, 7: 31

Ferrous rubidium sulfate

Density, 1: 160

Refractive index, 1: 160, 168; 7: 31

Solubility in water, 4: 243

Ferrous sodium sulfate

Solubility in water, 4: 238

Ferrous sulfate

Absorption spectra, solutions, 5: 327

Ammine

Decomposition pressure, 7: 278

Heat of decomposition, 7: 278

Boiling point elevation in aqueous solution, 3: 325

Decomposition pressure of hydrates, 7: 278

Density, aqueous solution, 3: 68

Diffusion in water, 5: 65

Electrical conductivity, aqueous solution, 6: 236, 240

Freezing mixtures, use in, 1: 64

Freezing point lowering of aqueous solution, 4: 256

Heat of formation, 5: 191

Magnetic susceptibility, 6: 357, 364

Aqueous solution, 6: 364

Reflectivity, selective, 5: 260

Solubility in water, 4: 224, 246

Solution velocity in water, 5: 56

Sound, velocity of, in aqueous solution, 6: 464

Specific heat, 5: 98

Aqueous solution, 5: 123

Surface tension, aqueous solution, 4: 465

Thermal conductivity, 5: 216

Vapor pressure lowering in aqueous solution, 3: 294

Verdet constant, aqueous solution, 6: 428

*-Ammonium sulfate***-Ammonium sulfate*-Lithium sulfate**-Ammonium sulfate*-Magnesium sulfate**-Cadmium sulfate***-Lithium sulfate*

Freezing point-solubility in water, 4: 343

-Magnesium sulfate

Density, 3: 134

-Potassium sulfate

Freezing point-solubility in water, 4: 342

-Sodium sulfate

Freezing point-solubility in water, 4: 343

-Sulfuric acid

Freezing point-solubility, 4: 43, 343

See also Melanterite.**Ferrous sulfide**

Electrical conductivity, 6: 148, 154

Heat of formation, 5: 191

Photoelectric current, 6: 69

Specific heat, 5: 98

Thermal conductivity, 5: 216

Thermoelectric power, 6: 224

Transition temperatures, 4: 7

X-ray diffraction data, 1: 342

See also Troilite.*-Lead sulfide*

Freezing point-solubility, 4: 52

-Silver sulfide

Freezing point-solubility, 4: 59

-Sodium sulfide

Freezing point-solubility, 4: 60

-Stannous sulfide

Freezing point-solubility, 4: 49

-Zinc sulfide

Freezing point-solubility, 4: 55

Ferrous thallium selenate

Refractive index, 7: 31

Ferrous thallium sulfate

Density, 1: 129

Refractive index, 1: 129, 165; 7: 31

Solubility in water, 4: 225

Ferrozoid (alloy), 2: 376

Electrical conductivity, 6: 196

Ferry alloy, 2: 376

Electrical conductivity, 6: 196

Féry zinc-carbon cell, 6: 317**Festel metal, 2: 376, 464**

Thermal expansion, 2: 464

Fiber board, acoustic absorption, 6: 460**Fiberloid, 2: 296****Fiberoid.** *See* Fish paper.**Fibers**

Adsorption on, 3: 252

Heat of wetting, 5: 142

Thermal conductivity, 2: 312; 5: 217

X-ray diffraction data, 2: 357

Fibers, vegetable

Botanical classification, 2: 231

Breaking strengths, comparative, 2: 236

Density, 2: 237

Elements, dimensions, 2: 232

Fireproofing, 2: 239

Hygroscopic moisture, 2: 237

Microscopical characteristics, 2: 232

Regain and moisture content, 2: 238

Regain in conditioning, 2: 238

Specific heat, 2: 237

Fibroferrite

Density, 1: 128

Refractive index, 1: 128, 166

Fiedlerite

Decomposition point, 1: 115

Density, 1: 115

Refractive index, 1: 115, 173

Field, definition, 1: 36**Field intensity, definition, 1: 36****Filaments, evaporation from hot, 5: 53****File metal, 2: 376; cf. 561, 562****Films**

Absorption of light by, 5: 255

Condensed, 4: 476

Expanded, 4: 476

"Gaseous," 4: 476

Metallic, reflectivity of, 5: 251, 255

Metals on glass

Electrical conductivity, 4: 475

Optical properties, 4: 475

Thickness, 4: 475

Photographic, 5: 441

Properties of, 4: 475

Soap, 4: 477

Filters

Equalizing, 5: 435

Light, for mercury vapor lamp, 7: 160

Optical pyrometers, 1: 60

Photometric, 5: 264, 435

Spectral, 5: 271

Finland, weights and measures, 1: 6**Finnemanite, refractive index, 7: 20****Fir wood**

Density, 2: 314

Thermal conductivity, 2: 314

Fire armor, 2: 376**Fire clay, thermal conductivity, 2: 85****Fire clay brick**

Crushing strength, 2: 83

Density, 2: 82

Electrical conductivity, 2: 86

Expansion on heating, 2: 84

Fusion temperature, 2: 83

Porosity, 2: 82

Specific heat, 2: 85

Temperature of failure under load, 2: 83

Thermal expansion, 2: 83

Fireproofing agents, cotton, 2: 239**Firminy iron, magnetic properties, 6: 386****Fish oils.** *See* Oils, animal.

Fish paper

- Density, 2: 314
- Dielectric strength, 2: 310
- Mica and, thermal conductivity, 2: 314
- Thermal conductivity, 2: 314

Fisher's formula (flow of gas), 5: 2**FitzGerald formula** (evaporation), 5: 54**Fixed points**, thermometric, 1: 53**Flame propagation**, 2: 182**Flames**

- Electrical conductivity, 6: 156
- Thermal radiation of, 5: 244

Flange metal, 2: 376; *cf.* 559, 601**Flash point**

- Definition, 2: 150
- Insulating oils, 2: 305
- Nitrocellulose plastics, 2: 297
- Oils and fats, 2: 211
- Organic liquids, 2: 161
- Petroleum products, 2: 150
- Pyroxylin plastics, 2: 297
- Tars, 2: 172

Flax fibers

- Density, 2: 313
- Moisture content at various humidities, 2: 323
- Thermal conductivity, 2: 313

Fletcher and Emperer bearing, 2: 376; *cf.* 536, 601**Fletcher's alloy**, 2: 376**Flinkite**

- Density, 1: 127
- Refractive index, 1: 127, 173

Flint

- Density, 2: 87
- Hardness, 2: 87
- Thermal expansion, 2: 87
- See also* Silica.

Flint alloy, 2: 376; *cf.* 508, 603**Floor tile**, water absorption, 2: 65**Florencite**

- Density, 1: 139
- Refractive index, 1: 139, 167

Fuellite

- Density, 1: 136
- Refractive index, 1: 136, 169

Fluidity

- Conversion factors, 1: 25
- Definition, 1: 36
- See also* Viscosity.

Fluorantimonic acid

- Heat of formation, 5: 180

Fluocerite

- Density, 1: 138
- Melting point, 1: 138
- Refractive index, 1: 138, 167
- See also* Cerium fluoride.

Fluoran

- Absorption spectra, 5: 353
- Acetic acid*

Fluoranthene

- Quinoline
- Density, 7: 88
- Refractive index, 7: 88
- Dispersion, 7: 107

Fluorene

- Absorption spectra, 5: 349, 378
- Boiling point, 3: 227
- Heat of combustion, 5: 164
- Magnetic susceptibility, 6: 363
- Vapor pressure, 3: 227
- Acenaphthene*
- Acetic acid*
- Acetone*
- Aniline*
- Benzene*
- Carbon tetrachloride*
- Chlorobenzene*
- Dinitrobenzene (*o*-, *m*-, *p*-)*
- 2, 4-Dinitrophenol*
- 2, 4-Dinitrotoluene*

Fluorene.—(Continued)

- 2, 6-Dinitrotoluene*
- 3, 4-Dinitrotoluene*
- 3, 5-Dinitrotoluene*
- Ethyl alcohol*
- Indene
- Freezing point-solubility, 4: 180
- Methyl alcohol
- Freezing point-solubility, 4: 101
- Naphthalene
- Freezing point-solubility, 4: 180
- Nitrobenzene
- Freezing point-solubility, 4: 177
- Picramide
- Freezing point-solubility, 4: 127
- Picric acid
- Freezing point-solubility, 4: 121
- Picryl chloride
- Freezing point-solubility, 4: 117
- Pyridine
- Freezing point-solubility, 4: 174
- Quinoline
- Density, 7: 87
- Refractive index, 7: 87
- Dispersion, 7: 107
- p*-Quinone
- Freezing point-solubility, 4: 127
- Styphnic acid
- Freezing point-solubility, 4: 122
- Toluene
- Freezing point-solubility, 4: 179
- 1, 3, 5-Trinitrobenzene
- Freezing point-solubility, 4: 119
- 2, 4, 6-Trinitrotoluene
- Freezing point-solubility, 4: 146
- p*-Xylene
- Freezing point-solubility, 4: 180
- Fluorenone**
- Quinoline
- Density, 7: 87
- Refractive index, 7: 87
- Dispersion, 7: 107
- 1, 3, 5-Trinitrobenzene
- Freezing point-solubility, 4: 119
- Fluorescein**
- Absorption spectra, 5: 353; 7: 192
- Fluorescence, 5: 390
- Photoluminescence, 5: 387
- Fluorescence of gases**, 5: 391
- Fluorescent absorption**, law of, 6: 5
- Fluorine**
- Band spectra, 5: 413
- Boiling point, 1: 102
- Critical potentials, 6: 71
- Density
- Gas, 1: 102; 3: 3
- Liquid, 1: 102; 3: 20
- Solid, 1: 104
- Dissymmetry in emission of electrons freed by X-rays, 6: 5
- Emission spectra, 5: 292
- Free energy, reaction with hydrogen, 7: 232
- Heat of fusion, 1: 104
- Heat of vaporization, 1: 102
- Isotopes, 1: 45
- Melting point, 1: 104
- Persistent lines, 5: 323
- Quantum numbers, 5: 408
- Refractivity of vapor, 7: 6
- Specific heat, gas, 7: 232
- Spectral series, 5: 398
- Thermal expansion, liquid, 1: 102; 3: 20
- Thermochemistry, 5: 176
- X-ray emission spectra, 6: 36
- Zeeman effect, 5: 420
- Fluorite**
- Compressibility, 3: 50
- Density, 1: 143
- Electrical conductivity, aqueous solution, 6: 257

Flourite.—(Continued)

- Magnetic susceptibility, 6: 364
- Melting point, 1: 143
- Refractive index, 1: 143, 165
- Residual rays, 5: 261
- Spectral filter, use as, 5: 273
- Transmission of radiant energy, 5: 270
- See also* Calcium fluoride.
- Fluoroacetic acid**, electrical conductivity, aqueous solution, 6: 262
- Fluoroapatite**
- Density, 1: 143
- Melting point, 1: 143
- Pyroelectric effect, 6: 210
- Refractive index, 1: 143, 167
- Fluorobenzene**
- Absorption spectra, 5: 332, 338
- Birefringence, 7: 111
- Boiling point, 3: 221
- Compressibility, 3: 36
- Critical point data, 3: 245, 248
- Density, 3: 29, 33
- Magnetic susceptibility, 6: 362
- Orthobaric density, 3: 245
- Refractive index, 7: 38
- Surface tension, 4: 454
- Vapor pressure, 3: 221
- Vapor pressure above 1 atm., 3: 245
- Verdet constant, 6: 429
- Viscosity, 7: 217
- Antimony tribromide*
- Antimony trichloride*
- Benzene*
- Bromobenzene*
- Chlorobenzene*
- Iodobenzene
- Freezing point-solubility, 4: 128
- Fluorobenzoic acid** (*o*-, *m*-, *p*-)
- Electrical conductivity, aqueous solution, 6: 278
- p*-Fluorobenzoic acid**
- Benzoic acid*
- Fluorobromoacetic acid**
- Magnetic susceptibility, 6: 361
- p*-Fluorobromobenzene**
- Surface tension, 4: 453
- Fluorocyclene**
- Nitrobenzene
- Boiling point elevation, 3: 343
- 1-Fluoro-2, 4-dinitrobenzene**
- p*-Fluoronitrobenzene
- Freezing point-solubility, 4: 118
- Fluoroethane**, solubility in water, 3: 261
- Fluoroethylene**, solubility in non-aqueous liquids, 3: 269
- Fluoroform**
- Solubility in non-aqueous liquids, 3: 268
- Solubility in water, 3: 261
- o*-Fluoronitrobenzene**
- p*-Fluoronitrobenzene
- Freezing point-solubility, 4: 124
- m*-Fluoronitrobenzene**
- Crystallization velocity, 5: 61
- Surface tension, 4: 453
- m*-Bromonitrobenzene*
- m*-Chloronitrobenzene*
- p*-Fluoronitrobenzene**
- 1-Fluoro-2, 4-dinitrobenzene*
- o*-Fluoronitrobenzene*
- p*-Fluorophentole**
- Birefringence, magnetic, 7: 111
- Magnetic susceptibility, 6: 363
- Vapor pressure, 3: 224
- Fluoropropylene**, solubility in water, 3: 261
- m*-Fluorotoluene**, surface tension, 4: 456
- Fluosilicic acid**, heat of formation, 5: 182
- Flux**
- Definition, 1: 36
- Luminous, definition, 1: 37
- Magnetic, definition, 1: 37

* Data for system will be found under this compound in Index. Full explanation on page vii.

Fontainmoreau's bronze, 2: 376; cf. 465, 546

Foods, cereal, hygroscopicity of, 2: 324

Foot-candle, definition, 1: 37

Foot-pound, definition, 1: 37

Foot-poundal, definition, 1: 37

Forbes metal, 2: 376; cf. 465, 546

Force

Conversion factors, 1: 23, 24

Definition, 1: 37

Moment of, conversion factors, 1: 24

Formaldehyde

Absorption spectra, 5: 335, 365

Amino acids, solubility of, in, 4: 400

Density, aqueous solution, 3: 111, 113

Electrical conductivity, aqueous solution, 6: 261

Heat of combustion, 5: 167

Magnetic susceptibility, 6: 361

Refractive index, aqueous solution, 7: 66

Solubility in water, 3: 261

Vapor pressure, aqueous solution, 3: 290

-Amyl alcohol*

-Chloroform*

-Ethyl ether*

Formamide

Cryoscopic constant, 4: 183

Density, 3: 28

Aqueous solution, 3: 111, 113

Dielectric constant, 6: 83

Electrical conductivity, 6: 143

Aqueous solution, 6: 261

Freezing point lowering of aqueous solution, 4: 262

Heat of combustion, 5: 167

Magnetic susceptibility, 6: 361

Refractive index, 7: 34

Solubility in water, 4: 251

Specific heat, 5: 107

Surface tension, 4: 448

Viscosity

Aqueous solution, 5: 22

Liquid, 5: 28-30; 7: 213

-Acetic acid*

-Ammonium bromide*

-Ammonium formate*

-Ammonium iodide*

-Ammonium nitrate*

-Barium chloride*

-Barium nitrate*

-Butyric acid*

-Calcium nitrate*-Ethyl alcohol

-Cesium chloride*

-Cesium nitrate*

-Cobaltous bromide*

-Diethyl tartrate*

-Ethyl alcohol*

-Ethyl alcohol*-Lithium nitrate

-Ethyl alcohol*-Rubidium iodide

-Ethyl alcohol*-Tetraethylammonium iodide

-Formic acid

Density, 3: 148

Freezing point-solubility, 4: 99

Viscosity, 5: 33

-Isoamyl alcohol

Density, 3: 150

Viscosity, 5: 34

-Isobutyl alcohol

Density, 3: 150

Viscosity, 5: 33

-Lithium formate

Density, 3: 141

Viscosity, 5: 29

-Lithium nitrate

Viscosity, 5: 29

-Mercuric chloride

Viscosity, 5: 28

-Methyl alcohol

Density, 3: 149

Formamide.—(Continued)

-Nicotine

Density, 3: 150

-Potassium chloride

Viscosity, 5: 29

-Potassium iodide

Viscosity, 5: 29

-Potassium nitrate

Density, 3: 142

Viscosity, 5: 29

-Potassium thiocyanate

Viscosity, 5: 30

-Propionic acid

Density, 3: 149

Freezing point-solubility, 4: 100

Viscosity, 5: 33

-Propyl alcohol

Density, 3: 149

Viscosity, 5: 33

-Pyridine

Density, 3: 150

Viscosity, 5: 34

-Rubidium bromide

Viscosity, 5: 30

-Rubidium chloride

Viscosity, 5: 30

-Rubidium formate

Density, 3: 142

Viscosity, 5: 30

-Rubidium iodide

Viscosity, 5: 30

-Rubidium nitrate

Viscosity, 5: 30

-Sodium *m*-aminobenzoate

Density, 3: 141

Viscosity, 5: 29

-Sodium benzenesulfonate

Density, 3: 141

Viscosity, 5: 29

-Sodium benzoate

Density, 3: 141

Viscosity, 5: 29

-Sodium bromide

Viscosity, 5: 29

-Sodium chloride

Freezing point-solubility in water, 4: 400

-Sodium chromate

Viscosity, 5: 29

-Sodium 3, 5-dinitrobenzoate

Density, 3: 141

Viscosity, 5: 29

-Sodium formate

Density, 3: 141

Viscosity, 5: 29

-Sodium iodide

Viscosity, 5: 29

-Sodium nitrate

Density, 3: 141

Viscosity, 5: 29

-Sodium salicylate

Density, 3: 141

Viscosity, 5: 29

-Sodium succinate

Density, 3: 141

Viscosity, 5: 29

-Sodium sulfate

Freezing point-solubility in water, 4: 400

-Strontium nitrate

Density, 3: 140

Viscosity, 5: 29

-Tetraethylammonium iodide

Viscosity, 5: 34

-Tetramethylammonium chloride

Viscosity, 5: 33

Formanilide

Boiling point elevation in aqueous solution, 3: 327

Crystallization velocity, 5: 61

Dielectric constant, 6: 92

Formanilide.—(Continued)

Electrical conductivity, aqueous solution, 6: 280

Heat of combustion, 5: 168

Melting point under pressure, 4: 10

Surface tension, 4: 456

Verdet constant, 6: 429

Viscosity, 7: 218

-Acetone*

-Benzene*

-Chloroform*

-Ethyl alcohol*

-Ethyl ether*

-Methylal

Boiling point elevation, 3: 340

-Pyridine

Density, 3: 170

Viscosity, 5: 42

Formation, heat of, 5: 162, 169, 212

Formic acid

Absorption spectra, 5: 331, 335

Azeotropic mixtures, 3: 318, 323

Boiling point, 3: 215, 333

Aqueous solution, 3: 323

Condensation on ions and nuclei, 6: 117

Cryoscopic constant, 4: 183, 215

Decomposition, kinetics of, 7: 116, 123

Density

Aqueous solution, 3: 111, 122

Liquid, 3: 28

Dielectric absorption, 6: 83

Dielectric constant, 6: 83

Diffusion in benzene, 5: 74

Diffusion in methyl alcohol, 5: 72

Diffusion in water, 5: 69

Diffusion of vapor in gases, 5: 62

Electrical conductivity, 6: 143

Aqueous solution, 6: 261

Entropy, 7: 244

Esterification constant, 7: 138

Free energy, 7: 244

Aqueous solution, 7: 244

Decomposition in water, 7: 244

Solution, 7: 244

Freezing point lowering of aqueous solution, 4: 261

Heat of combustion, 5: 165

Heat of formation, 5: 181

Heat of fusion, 5: 132

Heat of solution in water, 5: 148, 159

Heat of vaporization, 5: 136

Heat of wetting by, 5: 142

Magnetic susceptibility, 6: 361

Melting point, 4: 6

Melting point under pressure, 4: 10

Polarization of light scattered by, 5: 266

Refractive index, 7: 12, 34, 79

Solubility in water, 4: 251

Solubility of salts in, 4: 206

Specific heat

Aqueous solution, 5: 124

Liquid, 5: 107

Solid, 5: 101

Surface tension, 4: 448

Aqueous solution, 4: 466

Thermal conductivity, 5: 228

Vapor pressure

Aqueous solution, 3: 364

Liquid, 3: 215

Solid, 3: 209

Verdet constant, dispersion of, 6: 434

Viscosity

Aqueous solution, 5: 20

Liquid, 5: 29, 33; 7: 213

X-ray diffraction bands, 1: 351

-Acetic acid*

-Ammonium butyrate*

-Ammonium formate*

-Ammonium glycolate*

-Ammonium isobutyrate*

-Ammonium lactate*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Formic acid.—(Continued)

- Ammonium malate*
- Ammonium propionate*
- Ammonium succinate*
- Aniline*
- Aniline formate*
- Barium formate*
- Benzaldehyde*
- Benzanilide*
- Benzene*
- Benzil*
- Benzoic acid*
- Bromoform*
- Calcium formate*
- Camphor*
- Carbon disulfide*
- Carbon tetrachloride*
- Chlorobenzene*
- Chloroform*
- o-Chloronitrobenzene*
- Cinnamic acid*
- Cottonseed oil*
- Cupric formate*
- Dimethylpyrone*
- Dinitromesitylene*
- Ethyl alcohol*
- Ethyl ether*
- Formamide*
- Hippuric acid
- Freezing point-solubility in water, 4: 400
- Kerosene
- Distribution coefficients in water, 3: 422
- Solubility, mutual, 3: 395
- Lead formate
- Freezing point-solubility, 4: 198
- Lithium formate
- Density, 3: 141
- Freezing point-solubility, 4: 205
- Viscosity, 5: 29
- Magnesium bromide
- Freezing point-solubility, 4: 202
- Mandelic acid
- Freezing point-solubility in water, 4: 400
- Methyl alcohol
- Density, 3: 148
- Naphthalene
- Freezing point-solubility in water, 4: 400
- β-Naphthol
- Boiling point elevation, 3: 333
- o-Nitrobenzoic acid
- Freezing point-solubility in water, 4: 400
- Oxalic acid
- Freezing point-solubility in water, 4: 400
- Phenylammonium formate
- Density, 3: 149
- Picoline
- Vapor pressure, 3: 287
- Potassium butyrate
- Density, aqueous solution, 3: 103
- Potassium formate
- Boiling point elevation, 3: 333
- Density, 3: 142
- Aqueous solution, 3: 103
- Freezing point-solubility, 4: 205
- Viscosity, 5: 30
- Potassium glycolate
- Density, aqueous solution, 3: 103
- Potassium isobutyrate
- Density, aqueous solution, 3: 103
- Potassium lactate
- Density, aqueous solution, 3: 103
- Potassium malate
- Density, aqueous solution, 3: 103
- Potassium propionate
- Density, aqueous solution, 3: 103

Formic acid.—(Continued)

- Potassium succinate
- Density, aqueous solution, 3: 103
- Potassium sulfate
- Boiling point elevation, 3: 333
- Pyridine
- Vapor pressure, 3: 287
- Rubidium formate
- Density, 3: 142
- Salicylic acid
- Freezing point-solubility in water, 4: 400
- Sodium butyrate
- Density, aqueous solution, 3: 102
- Sodium formate
- Boiling point elevation, 3: 333
- Density, 3: 141
- Aqueous solution, 3: 102
- Freezing point-solubility, 4: 205
- Viscosity, 5: 29
- Sodium glycolate
- Density, aqueous solution, 3: 102
- Sodium isobutyrate
- Density, aqueous solution, 3: 102
- Sodium lactate
- Density, aqueous solution, 3: 102
- Sodium malate
- Density, aqueous solution, 3: 102
- Sodium propionate
- Density, aqueous solution, 3: 102
- Sodium succinate
- Density, aqueous solution, 3: 102
- Sodium tartrate
- Density, aqueous solution, 3: 102
- Succinic acid
- Freezing point-solubility in water, 4: 400
- Toluene
- Distribution coefficients in water, 3: 422
- Solubility, mutual, 3: 395
- Trimethylamine
- Vapor pressure, 3: 287
- 2, 4, 6-Trinitroanisole
- Boiling point elevation, 3: 353
- 1, 3, 5-Trinitrobenzene
- Boiling point elevation, 3: 333
- Trinitromesitylene
- Boiling point elevation, 3: 333
- Xylene
- Distribution coefficients in water, 3: 422
- Solubility, mutual, 3: 395
- Form-o-toluide, viscosity, 7: 219
- Formula, dimensional, 1: 19
- Forsterite
- Density, 1: 142
- Melting point, 1: 142
- Refractive index, 1: 142, 172; 7: 23
- See also Magnesium orthosilicate.
- Anorthite*-Silica
- Diopside*-Silica
- Fossil flour. See Diatomaceous earth.
- Fossil meal. See Diatomaceous earth.
- Foudrinier wire (alloy), 2: 376; cf. 469, 555
- France, weights and measures, 1: 6
- Francolite
- Density, 1: 144
- Refractive index, 1: 144, 167
- Franklinite
- Kerr constant, 6: 435
- Magnetic susceptibility, 6: 364
- Thermal expansion, 3: 43
- Frary metal, 2: 376, 556
- Free energy, 5: 87; 7: 224
- Freezing mixtures, 1: 62
- Freezing point lowering
- Soap solutions, 5: 456
- Solutions, 4: 36, 183, 254
- Freezing point-solubility data, 4: 1
- Soaps and soap solutions, 5: 446

Freezing points. See Melting points.

- Freieslebenite, density, 1: 124
- Fremontite
- Density, 1: 153
- Refractive index, 1: 153, 171
- French alloy, 2: 376; cf. 480
- Frequency
- Conversion factors, 1: 21
- Definition, 1: 37
- Freund steel, 2: 376; cf. 472, 523
- Frick's alloys, 2: 376; cf. 475, 480, 601
- Friction
- Journal bearing, 2: 164
- Kinetic, 2: 164
- Static
- Lubricants, effect of, 2: 165
- Pressure, effect of, 2: 165
- Friedel-Crafts reaction, kinetics of, 7: 147
- Friedelite
- Density, 1: 130
- Refractive index, 1: 130, 167
- d-Fructose. See Levulose.
- l-Fructose, heat of combustion, 5: 166
- β-Fructose, solubility in aqueous ethyl alcohol, 4: 405
- Fuchsin
- Absorption spectra, 5: 354
- Refractive index, 7: 12, 15
- Isobutyl alcohol
- Distribution coefficients in water, 3: 432
- Fucitol, optical rotatory power, 7: 389
- Fucose
- Heat of combustion, 5: 166
- Optical rotatory power, 7: 389
- Fuel oils. See Hydrocarbon oils.
- Fuels
- Gaseous, 2: 166, 172
- Liquid, 2: 136, 162
- Solid, 2: 130
- Calorific value, 2: 135
- Classification, 2: 130
- Fuller board
- Density, 2: 314
- Thermal conductivity, 2: 314
- See also Pressboard.
- Fuller's earth
- Density, 2: 313
- Moisture content at various humidities, 2: 316
- Thermal conductivity, 2: 313
- Fumaric acid
- Absorption spectra, 5: 336
- Density, aqueous solution, 3: 114
- Electrical conductivity, aqueous solution, 6: 265
- Heat of combustion, 5: 165
- Heat of solution in water, 5: 148
- Magnetic susceptibility, 6: 361
- Maleic acid equilibrium, 7: 166, 170
- Solubility in water, 4: 251
- Surface tension, aqueous solution, 4: 468
- Acetone*
- Benzene*
- Carbon tetrachloride*
- Chloroform*
- Ethyl alcohol*
- Ethyl ether*
- Methyl alcohol
- Density, 3: 151
- Viscosity, 5: 34
- Xylene
- Freezing point-solubility, 4: 112
- Fumaryl chloride, Verdet constant, 6: 428
- Fungistrolin, optical rotatory power, 7: 464
- Fur fibers, relative durability, 2: 236
- Furane
- Absorption spectra, 5: 336
- Heat of vaporization, 5: 137

* Data for system will be found under this compound in Index. Full explanation on page vii.

Furfural

Absorption spectra, **5**: 337, 378
 Birefringence, magnetic, **7**: 111
 Boiling point, **3**: 219
 Aqueous solution, **3**: 311
 Density, **3**: 28, 33
 Aqueous solution, **3**: 112–114
 Dielectric constant, **6**: 88
 Diffusion in methyl alcohol, **5**: 72
 Electrical conductivity, **6**: 144
 Aqueous solution, **6**: 268
 Heat of vaporization, **5**: 137
 Magnetic susceptibility, **6**: 361
 Refractive index

 Aqueous solution, **7**: 68
 Dispersion, **7**: 100
 Liquid, **7**: 36
 Solubility in water, **3**: 388
 Solubility of salts in, **4**: 210
 Specific heat, **5**: 109
 Surface tension, **4**: 451
 -*Potassium iodide*
 Density, **3**: 142
 -*Tetraethylammonium iodide*
 Density, **3**: 169

Furfuralazine

-*Benzalazine**
 -*Thiophenalazine*
 Freezing point-solubility, **4**: 156

Furfuralcohol

Absorption spectra, **5**: 337, 378

Furfurane, absorption spectra, ultra-violet, **5**: 363, 378**Furmaryl chloride**, refractive index, **7**: 35**Furnaces**

Gas, for high temperatures, **1**: 66
 High temperature, **1**: 66
 Maximum temperatures in, **1**: 67

Fusion

Heat of, **5**: 130
 Volume change on, **2**: 459; **4**: 9

"G" alloy, **2**: 376; cf. 538**Gabbro**

Bulk density, **2**: 52
 Compressibility, **3**: 51
 Compressive strength, **2**: 48
 Elasticity, **2**: 52
 Hardness, **2**: 50
 Impact hardness, **2**: 51
 Porosity, **2**: 54
 Thermal conductivity, **2**: 55
 Thermal diffusivity, **2**: 56

Gadolinite

Density, **1**: 141
 Refractive index, **1**: 141, 173

Gadolinium

Cathodoluminescence, **5**: 388, 390
 Emission spectra, **5**: 297
 Persistent lines, **5**: 323
 X-ray absorption limits, **6**: 40
 X-ray emission spectra, **6**: 40
 X-ray series, limiting frequencies, **6**: 35

Gadolinium bromate

Solubility in water, **4**: 228

Gadolinium chloride

Magnetic susceptibility, **6**: 359

Gadolinium ethyl sulfate

Density, **1**: 140
 Magnetic susceptibility, **6**: 359
 Refractive index, **1**: 140, 166

Gadolinium m-hydroxybenzoate

Electrical conductivity, aqueous solution, **6**: 245

Gadolinium oxalate

Magnetic susceptibility, **6**: 359
 Solubility in aqueous solutions, **7**: 339
 -*Sulfuric acid*
 Freezing point-solubility in water, **4**: 335

Gadolinium oxide

Magnetic susceptibility, **6**: 359

Gadolinium salicylate, electrical conductivity, aqueous solution, **6**: 245**Gadolinium sulfate**

Decomposition pressure, **7**: 290
 Electrical conductivity, aqueous solution, **6**: 236
 Magnetic susceptibility, **6**: 359
 Solubility in aqueous solutions, **7**: 339
 Solubility in water, **4**: 227

-Sulfuric acid

Freezing point-solubility in water, **4**: 348

Gahnite

Density, **1**: 137
 Refractive index, **1**: 137, 165
 Thermal expansion, **3**: 43

Galactic system, size of, **1**: 387**Galactonic acid**

Optical rotatory power, **7**: 397

Galactose

Density, aqueous solution, **2**: 351
 Electrical conductivity, aqueous solution, **6**: 277
 Heat of combustion, **5**: 166
 Mutarotation, **2**: 351
 Optical rotation, **2**: 351; **7**: 395
 Osmotic pressure, **4**: 430
 Refractive index, aqueous solution, **2**: 351
 Solubility in ethyl alcohol, **2**: 351, **4**: 405
 Verdet constant, **6**: 429
 Viscosity, aqueous solution, **5**: 23

Galactose pentaacetate

Heat of combustion, **5**: 166

Galactosides

Optical rotatory power, **7**: 395

Galaheptose

Optical rotatory power, **7**: 398

Galalith

Density, **2**: 311
 Dielectric strength, **2**: 310
 Electrical conductivity, **2**: 310

Galegine bicarbonate

-*Ethyl alcohol**

Galegine nitrate

-*Ethyl alcohol**

Galegine sulfate

-*Ethyl alcohol**

Galena

Compressibility, **3**: 50
 Density, **1**: 115
 Magnetic susceptibility, **6**: 364
 Melting point, **1**: 115
 Refractive index, **1**: 115, 165
 Solution velocity in sulfuric acid, **5**: 57
 Thermal expansion, **3**: 44
 See also Lead sulfide.

Galenobismutite, density, **1**: 116**Gallic acid**

Boiling point elevation in aqueous solution, **3**: 327
 Diffusion in methyl alcohol, **5**: 73
 Diffusion in water, **5**: 71
 Electrical conductivity, aqueous solution, **6**: 280
 Heat of combustion, **5**: 165
 Heat of solution in water, **5**: 150

-Acetone***-Amyl acetate*****-Benzene*****-Carbon disulfide*****-Ethyl acetate*****-Ethyl alcohol*****-Ethyl ether*****-Isoamyl alcohol**

Density, **3**: 173

Gallium

Boiling point, **1**: 102
 Cathodoluminescence, **5**: 390

Gallium.—(Continued)

Compressibility, **3**: 47

Critical potentials, **6**: 71

Density

Liquid, **1**: 102; **2**: 457

Solid, **1**: 104; **2**: 456

Electrical conductivity

Liquid, **1**: 103

Solid, **1**: 104; **6**: 136, 137

Low temperature, **6**: 127

Emission spectra, **5**: 297

Heat of fusion, **1**: 104; **2**: 458

Isotopes, **1**: 45

Magnetic susceptibility, **6**: 355

Melting point, **1**: 104

Persistent lines, **5**: 323

Quantum numbers, **5**: 408

Specific heat

Liquid, **1**: 103

Solid, **1**: 104

Spectral series, **5**: 398

Surface tension, **1**: 103; **4**: 440

Thermal expansion

Liquid, **2**: 463

Solid, **1**: 104; **2**: 460

X-ray absorption limits, **6**: 37

X-ray emission spectra, **6**: 37

-Indium

Density, **2**: 594

Gallium amalgams

Partial vapor pressure, **3**: 284

Gallium chloride

-*Ethyl ether**

Gallium potassium sulfate

Density, **1**: 156

Refractive index, **1**: 156, 165

Gallium rubidium sulfate

Density, **1**: 159

Refractive index, **1**: 159, 165

Gallium selenate

Solubility in water, **4**: 220

Gallium sesquioxide

Specific heat, **5**: 98

X-ray diffraction data, **1**: 342

Gallium thallium sulfate

Density, **1**: 118

Refractive index, **1**: 118, 165

Gallium trichloride, density, liquid, **3**: 23**Galton's pipe**, **6**: 456**Galvanic cells**

Liquid junction potential, **6**: 338

Galvanomagnetic effects, **6**: 415**Gamma**, definition, **1**: 37**Gamma rays**

Absorption coefficient, **6**: 14, 20, 21
 Ionization of gases by, **1**: 365; **6**: 123
 Wave lengths, **1**: 371

Ganomalite

Density, **1**: 144

Refractive index, **1**: 144, 173

Ganophyllite

Density, **1**: 137

Refractive index, **1**: 137, 172

Garnet

Density, **2**: 87

Hardness, **2**: 87

X-ray diffraction data, **1**: 344

Gas

Ideal, definition, **1**: 37

Blast furnace, composition, **2**: 167

Coal

Composition, **2**: 167

Explosion, cooling losses, **2**: 194

Explosion temperature, **2**: 192

Coke-oven, composition, **2**: 167

Natural

Composition, **2**: 166

P-V-T relations, **3**: 17

Radioactivity, **1**: 380

Solubility in water, **3**: 260

Oil, composition, **2**: 167

* Data for system will be found under this compound in Index. Full explanation on page vii.

Gas.—(Continued)

- Producer, composition, 2: 167
- Water
 - Composition, 2: 167
 - Inflammability, limits of, 2: 181
- Gas conduction** (electrical)
 - Carriers, properties of, 6: 110
 - Corona, 6: 107
 - Flames, 6: 156
 - Ionization, 6: 119
- Gas constant**
 - Definition, 1: 37
 - Molecular, 1: 18
 - Value, 1: 18
- Gas engine**, temperature cycle in, 2: 193
- Gas flow**, laws of, 1: 91
- Gas lamp**
 - Luminous efficiency, 5: 437, 438
 - Temperature, 5: 247
- Gas oil**
 - Bromine number, 2: 154
 - Density, 2: 140, 157
 - Distillates, physical properties, 2: 157
 - Heat of vaporization, 2: 151
 - Iodine number, 2: 154
 - Petroleum, content of, 2: 139
 - Refractive index, 2: 153
 - Surface tension, 2: 146, 157
 - Viscosity, 2: 157
 - See also* Hydrocarbon oils.
- Gas poisoning**
 - Prevention and treatment, 2: 321
- Gas reactions**, kinetics of, 7: 116
- Gases**
 - Accommodation coefficients, 5: 53
 - Adsorption, 3: 249
 - Alpha particles, stopping power for, 1: 370
 - Birefringence, 7: 110
 - Compressibility, 3: 3
 - Critical potentials, 6: 70
 - Density, 3: 3
 - Correction for buoyancy, 1: 78
 - Detonation, 2: 184
 - Dielectric properties, 6: 74, 82
 - Diffusion, coefficient of, 5: 62
 - Electrical conductivity, 6: 110
 - Electrical ignition, 2: 175
 - Electron emission, X-rays, 6: 5
 - Electrons, primary, absorption of, 6: 61
 - Electrons, secondary, emission of, 6: 63
 - Emission spectra, 5: 276
 - Entropy, 5: 84; 7: 224
 - Explosive limits, 2: 176
 - Explosive mixtures, 2: 162, 172
 - Flame propagation in, 2: 182
 - Flow through capillary tube, 1: 91; 5: 1
 - Fluorescence, 5: 391
 - Free energy, 5: 87; 7: 224
 - Fuel value, 2: 166
 - Fugacity, 7: 224
 - Heat convection in, 5: 234
 - Heat of adsorption, 5: 139
 - Ignition temperature, 2: 150, 161, 172
 - Ionization of, 6: 119
 - By alpha particles, 1: 365
 - Ions, 6: 110
 - Joule-Thomson effect, 5: 144
 - Kinetic theory, 1: 91
 - Limits of inflammability, 2: 176
 - Luminous efficiency of electrically excited, 5: 437
 - Magnetic susceptibility, 6: 354
 - Mixtures, viscosity of, 5: 4
 - Molecular data, 1: 92
 - Natural, radioactivity of, 1: 380
 - P-V-T* relations, 3: 3
 - Persistent spectra, 5: 322
 - Polarization of light by, 5: 265
 - Refractivity, 7: 1
 - Rubber, permeability of, to, 2: 272

Gases.—(Continued)

- Solubility in
 - Colloidal solutions, 3: 281
 - Liquids, 3: 254, 261
 - Molten metals, 3: 270
 - Platinum metals, 3: 253
 - Solutions, 3: 271
 - Water, 3: 255
- Sound, velocity of, in, 6: 461
- Specific heat, 5: 79, 84; 7: 224
- Spring, radioactivity of, 1: 373
- Stopping power for radioactive substances, 1: 370
- Thermal conductivity, 5: 213
- Thermal expansion, 3: 3
- Thermodynamics of, 5: 87; 7: 224
- Toxicology of, 2: 318
- Verdet constant, 6: 425
- Viscosity, 5: 1
- Gasolene**
 - Bromine number, 2: 154
 - Density, 2: 140, 145
 - Dew point, 2: 149
 - Explosion in closed vessels, 2: 192
 - Flash point, 2: 150
 - Heat of vaporization, 2: 151
 - Iodine number, 2: 154
 - Light absorption, coefficient of, 2: 153
 - Melting point, 2: 148
 - Petroleum, content of, 2: 139
 - Refractive index, 2: 153
 - Solubility in water, 3: 261, 392
 - Sound, velocity of
 - Gas, 6: 463
 - Liquid, 6: 464
 - Sulfuric acid absorption, 2: 154
 - Surface tension, 2: 146
 - Vapor pressure, 2: 149
 - Viscosity, 2: 146
- Gauss**, definition, 1: 37
- Gaussian gravitation constant**
 - Definition, 1: 37
- Gaylussite**
 - Density, 1: 154
 - Refractive index, 1: 154, 169
- Gear efficiency**
 - Temperature, effect of, 2: 166
- Gearsutite**
 - Density, 1: 145
 - Refractive index, 1: 145, 168
- Geddes metal**, 2: 376; *cf.* 556, 602
- Gegosaponin**
 - Optical rotatory power, 7: 465
- Gehlenite**
 - Density, 1: 146
 - Melting point, 4: 84
 - Refractive index, 1: 146, 167
 - Akermanite**
 - Akermanite**-*Grossularite*
 - Anorthite**
 - Calcium aluminate**
 - Calcium orthosilicate**
 - Calcium silicate**
 - Grossularite*
 - Freezing point-solubility, 4: 91, 92
 - Sarcosite*
 - Freezing point-solubility, 4: 92
 - Tricalcium decaluminate*
 - Freezing point-solubility, 4: 90, 92
- Geikielite**
 - Density, 1: 142
 - Refractive index, 1: 142, 168
 - See also* Magnesium titanate.
- Gelatins**, 2: 217
 - Absorption spectra, 5: 334
 - Adhesive strength, 2: 223
 - Collagen, preparation from, by hydrolysis, 2: 229
 - Contractility, 2: 227
 - Density, aqueous solution, 7: 76

Gelatins.—(Continued)

- Dielectric constant, aqueous solution 6: 101
- Elasticity, 2: 224
- Electrical conductivity, 2: 230
- Food, 2: 218
- Heat of swelling, 5: 143
- Jelly strength, 2: 221
- Melting point, 2: 229
- Mutarotation, 2: 230
- Osmotic pressure, 2: 227; 4: 430
- Photographic, 2: 218
- Plasticity, 2: 224
- Refractive index, aqueous solution, 7: 76
- Solubility in water, 2: 229
- Solvent power numbers, 2: 229
- Sound, velocity of, in, 6: 465
- Swelling, 2: 227
- Surface tension, 2: 225
- Thermal expansion, 2: 227
- Vapor pressure lowering in aqueous solution, 3: 293
- Viscosity, 2: 223
- X-rays, absorption coefficient, 6: 16
- Gelling point**, definition, 2: 221
- Gels**, adsorption on, from solution, 3: 252
- Gelsemine**, optical rotatory power, 7: 476
- Genelite** (alloy), 2: 376
- Genthite**, density, 1: 142
- Gentiacaulin**
 - Optical rotatory power, 7: 478
- Gentiobiose**, optical rotatory power, 7: 400
- Gentisic acid**
 - Chloroform**
 - Ethyl ether**
 - Xylene*
 - Distribution coefficients in water, 3: 430
- Geocronite**, density, 1: 116
- Geodetic data**, 1: 393
- Geophone**, 6: 457
- Georgiadesite**, density, 1: 116
- Geranic acid**
 - Heat of combustion, 5: 166
 - Refractive index, 7: 52
- Geraniol**
 - Absorption spectra, 5: 347
 - Azeotropic mixtures, 3: 322
- Geraniol formate**
 - Magnetic susceptibility, 6: 363
- Gerhardtite**
 - Density, 1: 122
 - Refractive index, 1: 122, 172
- German silver**, 2: 376; *cf.* 475, 480, 601
 - Electrical conductivity, 6: 170, 171
 - Emission, spectral, 5: 254
 - Hall effect, 6: 417
 - Peltier coefficient, 6: 227
 - Thermal conductivity, 5: 224
 - Thermoelectric properties, 6: 219
 - Thomson coefficient, 6: 228
- Germanium**
 - Absorption spectra, solutions, 5: 328
 - Boiling point, 1: 102
 - Cathodoluminescence, 5: 390
 - Compressibility, 3: 47, 48
 - Critical potentials, 6: 71
 - Density, 1: 104; 2: 456
 - Electrical conductivity, 1: 104; 6: 136
 - Low temperature, 6: 127, 133
 - Emission spectra, 5: 297
 - Hardness, 2: 592
 - Heat of vaporization, 1: 102
 - Isotopes, 1: 45
 - Magnetic susceptibility, 6: 355
 - Melting point, 1: 104
 - Persistent lines, 5: 323
 - Quantum numbers, 5: 408
 - Specific heat, 1: 104; 5: 93
 - Spectral series, 5: 398

* Data for system will be found under this compound in Index. Full explanation on page vii.

Germanium.—(Continued)

- Thermoelectric properties, **6**: 214
- X-ray absorption limits, **6**: 37
- X-ray absorption spectra, **6**: 37
- X-ray crystal structure, **1**: 340
- Germanium bromide**
 - Electrical conductivity, **6**: 142
- Germanium dioxide**, specific heat, **5**: 96
- Germanium hydride**
 - Density
 - Gas, **3**: 3
 - Liquid, **3**: 23
- Germanium tetrachloride**
 - Boiling point, **3**: 232
 - Critical point data, **3**: 232, 248
 - Vapor pressure, **3**: 214
 - Vapor pressure above 1 atm., **3**: 232
- Germany**, weights and measures, **1**: 6
- Gersdorffite**
 - Density, **1**: 132
 - See also Nickel arsenic sulfide.
- Gibbsite**
 - Density, **1**: 136
 - Melting point, **1**: 136
 - Refractive index, **1**: 136, 170
- Gilbert**, definition, **1**: 37
- Gillespite**
 - Density, **1**: 148
 - Refractive index, **1**: 148, 167
- Gilsonite**, **2**: 169
- Giobertite**. See Magnesium carbonate.
- Gismondite**
 - Dehydration behavior, **7**: 313
 - Density, **1**: 145
 - Melting point, **1**: 145
 - Refractive index, **1**: 145, 170
- Glance pitch**, **2**: 169
- Glaserite**
 - Density, **1**: 158
 - Refractive index, **1**: 158, 166
- Glass**, **2**: 87
 - Absorption constant for infra-red, **2**: 106
 - Absorption of light, **2**: 106
 - Absorption of X-rays, **6**: 20
 - Acoustic absorption, **6**: 460
 - Adsorption on, **3**: 252
 - Annealing temperature, **2**: 99
 - Birefringence, electric, **7**: 110
 - Bursting strength, **2**: 97
 - Chemical durability, **2**: 107
 - Cohesion temperature, **2**: 99
 - Composition, **2**: 88
 - Compressive strength, **2**: 93
 - Contact charge, **6**: 57
 - Deformation temperature, **2**: 99
 - Density, **2**: 87, 92, 93, 102, 315
 - Dielectric constant, **2**: 101
 - Dielectric strength, **2**: 101
 - Dispersion, **2**: 102
 - Elasticity, **2**: 97
 - Electrical conductivity, **2**: 101
 - Electrostriction, **6**: 207
 - Energy adsorption in dielectric, **2**: 101
 - Flow temperature, **2**: 99
 - Gamma rays, absorption coefficient, **6**: 20
 - Gas evolution from, **1**: 92
 - Gases, permeability to, **5**: 76
 - Hydrochloric acid, effect of, **2**: 108, 109
 - Light, diffuse transmission, **5**: 265
 - Light, transmission of, **5**: 264
 - Liquids, angle of contact of, **4**: 434
 - Magnetic susceptibility, **2**: 101; **6**: 364
 - Melting point diagrams, **2**: 97
 - Optical properties, **2**: 101
 - Pressure, effect of, **2**: 106
 - Permeability to gases, **5**: 76
 - Poisson's ratio, **2**: 93
 - Radiation, transmission of, **5**: 264
 - Refractive index, **2**: 102, 104
 - Temperature effect, **2**: 105

Glass.—(Continued)

- Sodium carbonate, effect of, **2**: 108, 109
- Sodium hydroxide, effect of, **2**: 108
- Softening temperature, **2**: 99
- Sound, transmission of, by, **6**: 459
- Sound, velocity of, in, **6**: 465
- Specific heat, **2**: 87, 93, 101
- Spectral filter, use as, **5**: 273
- Surface tension, **2**: 96
- Tensile strength, **2**: 93
- Thermal conductivity, **2**: 87, 101, 315; **5**: 217, 229
- Thermal expansion, **2**: 87, 93, 99, 100
- Thermal properties, **2**: 97
- Transmission factor, **2**: 106
- Verdet constant, **6**: 426
- Viscosity, **2**: 94
- Water, adsorption of, on, **3**: 251
- Water, effect of, **2**: 107
- X-ray diffraction data, **2**: 357
- X-rays, refraction of, by, **6**: 50
- Young's modulus, **2**: 93, 97
- Glass, apparatus**
 - Acids, effect of, **2**: 111
 - Alkalies, action of, **2**: 111
 - Durability, **2**: 109
 - Temperature, effect of, **2**: 112
 - Water, effect of, **2**: 110
- Glass, optical**
 - Dispersion, **2**: 102
 - Durability, **2**: 113
 - Refractive index, **2**: 102
- Glass wool**
 - Density, **2**: 312
 - Moisture content at various humidities, **2**: 316, 324
 - Thermal conductivity, **2**: 312
- Glauberite**
 - Density, **1**: 153
 - Refractive index, **1**: 153, 170
- Glaucobers salt**
 - Density, **1**: 150
 - Refractive index, **1**: 150, 168
- Glaucocroite**
 - Density, **1**: 144
 - Refractive index, **1**: 144, 172
- Glazes**. See Enamels, Glass.
- Gladiin**, refractive index in various solvents, **7**: 99
- Glievor bearing (alloy)**, **2**: 376; cf. 476
- Glockerite**, refractive index, **1**: 128, 173
- Glucinium**. See Beryllium.
- Glucodesose**
 - Optical rotatory power, **7**: 386
- Glucogallic acid**
 - Optical rotatory power, **7**: 466
- Glucosaccharic acid lactone**
 - Heat of combustion, **5**: 166
- Glucose**
 - Heat of combustion, **5**: 166
 - Optical rotatory power, **7**: 398
 - Solubility in aqueous ethyl alcohol, **4**: 405
- Glucuronic acid**
 - Electrical conductivity, aqueous solution, **6**: 277
 - Optical rotatory power, **7**: 396, 397
- Glucuronose**
 - Optical rotatory power, **7**: 399
- Glucosaccharic lactone**
 - Heat of combustion, **5**: 166
- Glucose, optical rotatory power, 7: 399**
- Glucosaminic acid**
 - Optical rotatory power, **7**: 398
- Glucosamine**
 - Optical rotatory power, **7**: 393
- Glucosan**, heat of combustion, **5**: 166
- Glucosanolide**
 - Optical rotatory power, **7**: 394
- d-Glucose**
 - Absorption spectra, **5**: 332
 - Adsorption by charcoal, **3**: 251

d-Glucose.—(Continued)

- Boiling point elevation in aqueous solution, **3**: 327
- Density, **3**: 45
- Aqueous solutions, **2**: 347
- Dielectric constant, aqueous solution, **6**: 101
- Diffusion in water, **5**: 71
- Electrical conductivity, aqueous solution, **6**: 277
- Freezing point lowering of aqueous solution, **4**: 263
- Heat of combustion, **5**: 166
- Heat of dilution with water, **5**: 161
- Mutarotation, **2**: 348, 349
- Kinetics of, **7**: 128
- Nitrogen derivatives, optical rotatory power, **7**: 393
- Optical rotation, **2**: 347
- Osmotic pressure, **4**: 430
- Refractive index, aqueous solution, **2**: 347; **7**: 69
- Solubility in aqueous acetone, **3**: 406
- Solubility in aqueous ethyl alcohol, **2**: 348; **4**: 405
- Solubility in water, **2**: 347; **4**: 251, 252
- Specific heat, **5**: 86, 103
- Aqueous solution, **5**: 125
- Surface tension, aqueous solution, **4**: 469
- Vapor pressure lowering in aqueous solution, **3**: 293
- Verdet constant, **6**: 429
- Viscosity, aqueous solution, **5**: 23
- Acetamide*
- Chloral hydrate*
- Hydrogen chloride
 - Surface tension, aqueous solution, **4**: 470
 - Viscosity, aqueous solution, **5**: 24
- Levulose
 - Solubility in water, **2**: 353
 - Surface tension, aqueous solution, **4**: 470
- Levulose-Sucrose
 - Solubility in water, **2**: 352
- Potassium chloride
 - Freezing point-solubility in water, **4**: 417
- Potassium hydroxide
 - Viscosity, aqueous solution, **5**: 24
- Sodium chloride
 - Freezing point-solubility in water, **4**: 417
- Sucrose
 - Solubility in water, **2**: 352
 - Viscosity, aqueous solution, **5**: 24
- Tartaric acid
 - Viscosity, aqueous solution, **5**: 24
- Glucose derivatives**
 - Optical rotatory power, **7**: 389
- Glucose pentaacetate**
 - Heat of combustion, **5**: 166
- Glucose sirup**, viscosity, **5**: 23
- Glucosedeose**
 - Optical rotatory power, **7**: 399
- α-Glucosidase**, **7**: 155
- Glucosides**
 - Hydrolysis by enzymes, **7**: 155
 - Optical rotatory power, **7**: 390
- Glucuronic acid**
 - Optical rotatory power, **7**: 397
- Glue**
 - Animal, **2**: 217
 - Density of solutions, **2**: 218
 - Drying behavior, **2**: 221
 - Gelling point, **2**: 221
 - Jelly strength, **2**: 220
 - Moisture content at various humidities, **2**: 325
 - Nitrogen content, **2**: 218
 - Rubber, effect on, **2**: 287

* Data for system will be found under this compound in Index. Full explanation on page vii.

Glue.—(Continued)Viscosity, **2**: 220Viscosity of solutions, **2**: 218**Glutaconic acid**, electrical conductivity, aqueous solution, **6**: 269**Glutamic acid**Absorption spectra, ultra-violet, **5**: 373Crystallography, **1**: 325Electrical conductivity, aqueous solution, **6**: 270Heat of combustion, **5**: 167Optical rotatory power, **7**: 377**Glutaric acid**Density, aqueous solution, **3**: 114Electrical conductivity, aqueous solution, **6**: 270Heat of combustion, **5**: 165Heat of fusion, **5**: 132Heat of solution in water, **5**: 149Specific heat, **5**: 102Verdet constant, **6**: 428

-Chloroform*

-Ethyl ether*

-Sulfuric acid

Freezing point-solubility, **4**: 188**Glutaric anhydride**Heat of combustion, **5**: 166**Glyceric acid**Density, aqueous solution, **3**: 114Electrical conductivity, aqueous solution, **6**: 264Optical rotatory power, **7**: 368**Glycerol**Absorption, index of, **6**: 98Absorption spectra, **5**: 332Angle of contact, **4**: 434Boiling point, aqueous solution, **3**: 310Boiling point elevation in aqueous solution, **3**: 327Compressibility, **3**: 36Density, **3**: 28, 33Aqueous solution, **3**: 112, 121Dielectric absorption, **6**: 98Dielectric constant, **6**: 97Dielectric dispersion, **6**: 98Diffusion in ethyl alcohol, **5**: 74Diffusion in methyl alcohol, **5**: 72Diffusion in organic liquids, **5**: 75Diffusion in water, **5**: 70Electrical conductivity, **6**: 143Aqueous solution, **6**: 264Emission, spectral, **5**: 257, 259Freezing point lowering of aqueous solution, **4**: 262Heat of adiabatic expansion, **5**: 147Heat of combustion, **5**: 164Heat of fusion, **5**: 132Heat of solution in water, **5**: 148, 157Ignition temperature, **2**: 151Magnetic susceptibility, **6**: 361Polarization of light reflected from, **5**: 261Reflectivity, selective, **5**: 260Refractive index, **6**: 98; **7**: 12Aqueous solution, **7**: 68Solubility in water, **4**: 251Solubility of salts in, **4**: 209

Specific heat

Aqueous solution, **5**: 116, 124Liquid, **5**: 114Solid, **5**: 102Spectral filter, use as, **5**: 273Surface tension, **4**: 450Aqueous solution, **4**: 467

Thermal conductivity

Aqueous solution, **5**: 227Liquid, **5**: 228Solid, **5**: 216Vapor pressure, aqueous solution, **3**: 291Vapor pressure lowering in aqueous solution, **3**: 293**Glycerol.**—(Continued)Verdet constant, **6**: 428

Viscosity

Aqueous solution, **5**: 23Liquid, **7**: 223X-rays, scattering coefficient, **6**: 17

-Acetic acid*

-Acetic acid*-Ethyl ether

-Acetone*

-Acetophenone*

-Ammonium aluminum sulfate*

-Ammonium bromide*-Ethyl alcohol

-Ammonium bromide*-Methyl alcohol

-Ammonium chloride*

-Aniline*

-o-Anisidine*

-Anisole*

-Benzaldehyde*

-Boric acid*

-Calcium hydroxide*

-Cesium chloride*

-Cesium nitrate*

-Cobaltous chloride*

-Cobaltous chloride*-Ethyl alcohol

-Cobaltous chloride*-Methyl alcohol

-Cupric sulfate*

-Diethyl tartrate*

-Dimethylaniline*

-Ethyl alcohol*

-Ethyl alcohol*-Lithium bromide

-Ethyl alcohol*-Potassium iodide

-Ethyl alcohol*-Water

-Ethylbenzylamine*

-Guaiacol

Solubility, mutual, **3**: 395

-Iodine

Density, **3**: 132Aqueous solution, **3**: 101Freezing point-solubility in water, **4**: 398

-Isoamyl alcohol

Density, **3**: 165Solubility, mutual, **3**: 395Viscosity, **5**: 40

-Lithium bromide

Viscosity, aqueous solution, **5**: 24

-Lithium bromide-Methyl alcohol

Viscosity, **5**: 31

-Mercuric chloride

Freezing point-solubility in water, **4**: 413

-Methyl alcohol

Density, **3**: 151Vapor pressure lowering, **3**: 300Viscosity, **5**: 30

-Methyl alcohol-Potassium iodide

Viscosity, **5**: 31

-Methyl ethyl ketone

Solubility, mutual, **3**: 395

-Methylaniline

Solubility, mutual, **3**: 395

-Monoethylpyrocatechol

Solubility, mutual, **3**: 396

-Potassium bromide

Density, **3**: 142Aqueous solution, **3**: 103

-Potassium chloride

Density, **3**: 141Aqueous solution, **3**: 103Viscosity, aqueous solution, **5**: 24

-Potassium iodide

Density, **3**: 142Viscosity, aqueous solution, **5**: 24

-Potassium sulfate

Freezing point-solubility in water, **4**: 413

-Propyl alcohol

Density, **3**: 164Viscosity, **5**: 40

-Rubidium bromide

Viscosity, aqueous solution, **5**: 24**Glycerol.**—(Continued)

-Rubidium iodide

Viscosity, aqueous solution, **5**: 24

-Salicylaldehyde

Solubility, mutual, **3**: 395

-Sodium chloride

Boiling point of aqueous solution, **3**: 316Density, **3**: 141Aqueous solution, **3**: 102Vapor pressure, aqueous solution, **3**: 379

-Sodium nitrate

Viscosity, aqueous solution, **5**: 24

-Strontium chloride

Viscosity, aqueous solution, **5**: 24

-Succinic acid

Density, **3**: 165Aqueous solution, **3**: 129

-Sulfur

Freezing point-solubility, **4**: 35

-Toluidine (o-, m-)

Solubility, mutual, **3**: 395

-Trimethyleneglycol

Density, aqueous solution, **3**: 129**Glyceryl acetate**, surface tension, **4**: 452**Glyceryl triacetate**Dielectric constant, **6**: 94Surface tension, **4**: 459**Glycine**, heat of combustion, **5**: 167**Glyco** (alloy), **2**: 376, 557**Glycocholic acid**Optical rotatory power, **7**: 467**Glycocol**Absorption spectra, ultra-violet, **5**: 366, 379Density, aqueous solution, **3**: 113Dielectric constant, aqueous solution, **6**: 101Electrical conductivity, aqueous solution, **6**: 263Freezing point lowering of aqueous solution, **4**: 262Heat of solution in water, **5**: 148Refractive index, **7**: 29Solubility of salts in aqueous solution, **4**: 403Vapor pressure lowering in aqueous solution, **3**: 293Viscosity, aqueous solution, **5**: 20

-Barium chloride*

-Barium perchlorate*

-Calcium chloride*

-Potassium acetate

Freezing point-solubility in water, **4**: 404

-Potassium chloride

Freezing point-solubility in water, **4**: 404

-Sodium chloride

Freezing point-solubility in water, **4**: 404

-Sodium nitrate

Freezing point-solubility in water, **4**: 404

-Strontium chloride

Freezing point-solubility in water, **4**: 404**Glycogen**, heat of combustion, **5**: 167**Glycol**Azeotropic mixtures, **3**: 320Boiling point, **3**: 217Compressibility, **3**: 36Density, **3**: 28Dielectric constant, **6**: 85Electrical conductivity, **6**: 143Aqueous solution, **6**: 263Heat of combustion, **5**: 164Heat of fusion, **5**: 132Heat of solution in water, **5**: 148, 154Heat of vaporization, **5**: 137

Glycol.—(Continued)

Magnetic susceptibility, **6**: 361
 Refractive index, aqueous solution, **7**: 67
 Solubility of salts in, **4**: 208
 Specific heat
 Aqueous solution, **5**: 124
 Liquid, **5**: 107
 Solid, **5**: 102
 Surface tension, **4**: 449
 Aqueous solution, **4**: 467
 Thermal conductivity, **5**: 228
 Vapor pressure, **3**: 217
 Verdet constant, **6**: 428

Viscosity

Aqueous solution, **5**: 22
 Liquid, **7**: 214
 -Tetraethylammonium iodide
 Density, **3**: 161
 -Tetramethylammonium iodide
 Density, **3**: 161

Glycol diacetate

Boiling point, **3**: 221
 Density, **3**: 29
 Vapor pressure, **3**: 221
 Verdet constant, **6**: 429

-Picric acid

Freezing point-solubility, **4**: 119

-Styphnic acid

Freezing point-solubility, **4**: 121

-Tetranitroaniline

Freezing point-solubility, **4**: 122

-Tetryl

Freezing point-solubility, **4**: 144

-Trinitronaphthalene

Freezing point-solubility, **4**: 144

-Trinitrotoluene

Freezing point-solubility, **4**: 144

-2, 4, 6-Trinitro-m-xylene

Freezing point-solubility, **4**: 144

Glycol dipropionate

Verdet constant, **6**: 429

Glycol ether, freezing point lowering of aqueous solution, **4**: 262**Glycolamide**

Boiling point elevation in aqueous solution, **3**: 327

-Acetone*

-Ethyl alcohol*

Glycolanilide

Boiling point elevation in aqueous solution, **3**: 327

-Acetone*

-Benzene*

-Chloroform*

-Ethyl alcohol*

-Ethyl ether*

Glycolic acid

Density, aqueous solution, **3**: 113; **7**: 67
 Electrical conductivity, aqueous solution, **6**: 262
 Heat of combustion, **5**: 165
 Heat of solution in water, **5**: 148
 Refractive index, aqueous solution, **7**: 67
 -Ethyl ether*
 -Molybdenum trioxide
 Density, aqueous solution, **3**: 102
 Refractive index, aqueous solution, **7**: 92

Glycolic nitrile

Dielectric constant, **6**: 84
 Electrical conductivity, **6**: 143
 Heat of combustion, **5**: 167

Glyoxal

Absorption spectra, **5**: 335, 374, 377
 Heat of solution in water, **5**: 148

Glyoxal bisulfite

Heat of solution in water, **5**: 148

Glyoxaline

Absorption spectra, **5**: 336
 Electrical conductivity, aqueous solution, **6**: 263

Glyoxylic acid

Electrical conductivity, aqueous solution, **6**: 262
 Heat of combustion, **5**: 165
 Heat of solution in water, **5**: 148
 Gmelinite, dehydration behavior, **7**: 312
 Gneiss
 Bulk density, **2**: 52
 Hardness, **2**: 50
 Impact hardness, **2**: 51
 Porosity, **2**: 54
 Thermal conductivity, **2**: 55
 Thermal diffusivity, **2**: 56

Goethite

Density, **1**: 128
 Refractive index, **1**: 128, 173; **7**: 21

Gold

Absorption, index of, **5**: 249, 251, 252
 Annealing temperature, **2**: 591
 Band spectra, **5**: 411
 Boiling point, **1**: 102; **3**: 205
 Brightness temperature, **5**: 245
 Compressibility, **3**: 46, 48
 Contact potential, **6**: 57
 Corbino effect, **6**: 419
 Critical potentials, **6**: 70
 Density
 Liquid, **1**: 102; **2**: 463
 Solid, **1**: 103; **2**: 456
 Elastic properties, **2**: 588
 Electrical conductivity
 Liquid, **1**: 103
 Solid, **1**: 103; **6**: 136-138
 Low temperature, **6**: 125, 132
 Magnetic field, effect of, **6**: 421
 Single crystal, **6**: 125
 Electrode potential, **6**: 319
 Electron emission excited by positive ions, **6**: 65
 Electrons, secondary emission of, **6**: 63
 Electrons, transmitted, velocity of, **6**: 62
 Electrons excited by X-rays, number of, **6**: 5
 Electrons freed by X-rays, energy of, **6**: 3
 Emission, spectral, **5**: 242, 253, 255, 256
 Emission spectra, **5**: 282
 Ettingshausen effect, **6**: 419
 Hall effect, **6**: 416, 417
 Hardness, **2**: 587
 Heat of fusion, **1**: 103; **2**: 458
 Heat of transformation, **2**: 458
 Heat of vaporization, **1**: 102
 J-Phenomenon, **6**: 1
 Lead, diffusion in, **5**: 77
 Magnetic susceptibility, **6**: 354
 Magnetron number, **6**: 346
 Mechanical properties, **2**: 586
 Melting point, **1**: 53, 103
 Nernst effect, **6**: 420
 Peltier coefficient, **6**: 227
 Persistent lines, **5**: 323
 Photoelectric threshold, **6**: 68
 Quantum numbers, **5**: 408
 Refraction, index of, **5**: 249, 251, 252
 Righi-Leduc effect, **6**: 421
 Silver, diffusion in, **5**: 77
 Sound, velocity of, in, **6**: 465
 Specific heat
 Liquid, **1**: 103; **5**: 94
 Solid, **1**: 103; **5**: 92
 Spectral series, **5**: 394
 Surface tension, **4**: 439
 Thermal conductivity, **5**: 220
 Magnetic field, effect of, **6**: 424
 Thermal expansion, **1**: 103; **2**: 459
 Thermochemistry, **5**: 189
 Thermoelectric properties, **6**: 214, 225
 Thomson coefficient, **6**: 228
 Vapor pressure, **3**: 205
 Viscosity, **5**: 7
 Volume change on fusion, **2**: 474

Gold.—(Continued)

X-ray absorption limits, **6**: 41
 X-ray crystal structure, **1**: 340
 X-ray emission spectra, **6**: 41
 X-ray series, limiting frequencies, **6**: 35
 X-rays, absorption, discontinuity in, **6**: 12
 X-rays, absorption coefficient, **6**: 13-15
 Zeeman effect, **5**: 420
 -Aluminum*
 -Aluminum*-Copper
 -Antimony*
 -Arsenic*
 -Bismuth*
 -Cadmium*
 -Chromium*
 -Copper*
 -Copper*-Nickel
 -Copper*-Silver
 -Iron
 Electrical conductivity, **6**: 165, 174
 Equilibrium diagram, **2**: 450
 -Lead
 Density, **2**: 589
 Electrical conductivity, **6**: 194
 Equilibrium diagram, **2**: 414
 Specific volume, **2**: 589
 -Magnesium
 Equilibrium diagram, **2**: 425
 Specific heat, **5**: 120
 -Manganese
 Equilibrium diagram, **2**: 425
 -Mercuric sulfate
 Electrode potential, **7**: 274
 -Mercury
 Density, **2**: 589
 Partial vapor pressure, **3**: 284
 Surface tension, **2**: 591
 Vapor pressure lowering, **3**: 300
 -Nickel
 Equilibrium diagram, **2**: 425
 Hardness, **2**: 586
 -Nickel-Silver
 Equilibrium diagram, **2**: 442
 -Palladium
 Electrical conductivity, **6**: 165
 Equilibrium diagram, **2**: 425
 Peltier coefficient, **6**: 227
 Thermal conductivity, **5**: 223
 Thermoelectric properties, **6**: 217
 X-ray diffraction data, **1**: 349
 -Platinum
 Electrical conductivity, **6**: 165
 Equilibrium diagram, **2**: 425
 Tensile strength, **2**: 586
 Thermal conductivity, **5**: 223
 -Silicon
 Equilibrium diagram, **2**: 426
 -Silver
 Annealing temperature, **2**: 591
 Compressibility, **2**: 589
 Density, **2**: 589
 Electrical conductivity, **6**: 160
 Equilibrium diagram, **2**: 421
 Hall effect, **6**: 417
 Hardness, **2**: 584, 586
 Specific heat, **5**: 119
 Specific volume, **2**: 589
 Thermal conductivity, **5**: 222
 Thermal expansion, **2**: 474
 Thermoelectric properties, **6**: 215
 X-ray diffraction data, **1**: 349
 -Sodium
 Equilibrium diagram, **2**: 425
 -Tellurium
 Freezing point-solubility, **4**: 29
 -Thallium
 Equilibrium diagram, **2**: 426

* Data for system will be found under this compound in Index. Full explanation on page vii.

Gold.—(Continued)

-Tin

- Density, **2**: 589
- Electrical conductivity, **6**: 165
- Equilibrium diagrams, **2**: 416
- Specific volume, **2**: 589
- Thermal expansion, **2**: 474

-Zinc

- Equilibrium diagram, **2**: 426
- Thermal conductivity, **5**: 223
- Thermoelectric properties, **6**: 217
- X-ray diffraction data, **1**: 349

Gold ditelluride

See Calaverite.

-Silver telluride

- Freezing point-solubility, **4**: 59

Gold salts. See Auric and Aurous.**Goslarite**

- Density, **1**: 118
- Refractive index, **1**: 118, 168; **7**: 20
- Transformation point, **1**: 118

Goyazite

- Density, **1**: 147
- Refractive index, **1**: 147, 167

Grade, definition, 1: 37**Grahamite, 2: 169****Gram calorie, value, 1: 18****Granfin, 2: 377; cf. 497, 527, 600, 608****Granite**

- Bulk density, **2**: 53
- Compressibility, **2**: 54; **3**: 51
- Compressive strength, **2**: 47
- Density, **2**: 315
- Dielectric constant, **6**: 105
- Elasticity, **2**: 52
- Hardness, **2**: 50
- Impact hardness, **2**: 51
- Porosity, **2**: 53
- Radioactivity, **1**: 377
- Shearing strength, **2**: 48
- Sound, velocity of, in, **6**: 466
- Tensile strength, **2**: 49
- Thermal conductivity, **2**: 55, 315
- Thermal diffusivity, **2**: 56, 316
- Thermal expansion, **2**: 54
- Transverse strength, **2**: 49

Granodiorite

- Compressibility, **3**: 51
- Compressive strength, **2**: 48

Graphite

- Absorption, index of, **5**: 249
- Density, **1**: 103; **2**: 82, 303, 314, 456, 592
- Electrical conductivity, **1**: 103; **2**: 86, 303; **6**: 136, 137
- Low temperature, **6**: 126
- Magnetic field, effect of, **6**: 422, 423
- Single crystal, **6**: 135
- Emission, spectral, **5**: 253
- Entropy, **5**: 87
- Ettingshausen effect, **6**: 419
- Free energy
 - Reaction with carbon dioxide, **7**: 243
 - Reaction with hydrogen, **7**: 244
 - Reaction with hydrogen and nitrogen, **7**: 244
- Transformation to diamond, **7**: 243
- Hall effect, **6**: 416, 417
- Hardness, **2**: 303
- Heat content, **5**: 87
- Heat of combustion, **5**: 181
- Magnetic susceptibility, **6**: 364
- Melting point, **1**: 103; **2**: 592
- Refraction, index of, **5**: 249
- Specific heat, **1**: 103; **2**: 85, 303; **5**: 85, 87, 94; **7**: 243
- Tensile strength, **2**: 592
- Thermal conductivity, **2**: 85, 304, 314; **5**: 216, 217, 220, 221
- Thermal expansion, **1**: 103; **2**: 83, 303, 468

Graphite.—(Continued)

- Thermodynamic potential, **5**: 87
- Thomson coefficient, **6**: 228
- Transmission of radiant energy, **5**: 269
- Vapor pressure at triple point, **2**: 592
- X-ray crystal structure, **1**: 340
- X-rays, reflection of, by, **6**: 50
- Young's modulus, **2**: 592

See also Carbon.

-Cobalt*

-Manganese

- Freezing point-solubility, **4**: 40

-Nickel

- Freezing point-solubility, **4**: 41

-Tungsten

- Freezing point-solubility, **4**: 40

Graphite metal, 2: 377; cf. 475, 557**Gravel**

- Density, **2**: 315
- Thermal conductivity, **2**: 315
- Thermal diffusivity, **2**: 316

Gravitation constant, 1: 17, 395Definition, **1**: 37**Gravity**

- Acceleration at sea-level, **1**: 401

Acceleration of

- Definition, **1**: 37

- Potsdam system, **1**: 396

Definition, **1**: 393Depth, variation with, **1**: 402Elevation, variation with, **1**: 402Standard, **1**: 18, 395

- Definition, **1**: 37

Great Britain

- Weights and measures, **1**: 7

Greece, weights and measures, 1: 8**Greek system**

- Weights and measures, **1**: 15

Green gold, 2: 377**Greenhart**

- Density, **2**: 315
- Thermal conductivity, **2**: 315

Greenockite

- Density, **1**: 120
- Refractive index, **1**: 120, 168

See also Cadmium sulfide.

Grey gold, 2: 377**Grid tubes, 6: 58****Grossularite**

- Density, **1**: 146
- Refractive index, **1**: 146, 165
- Thermal expansion, **3**: 45

-Akermanite*

-Akermanite*-Gehlenite

-Gehlenite*

Grove cell, 6: 318**Gruenerite**

- Density, **1**: 129
- Melting point, **1**: 129
- Refractive index, **1**: 129, 172

See also Ferrous metasilicate.

Guaiacol

- Absorption spectra, **5**: 342
- Azeotropic mixtures, **3**: 322
- Crystallization velocity, **5**: 61
- Crystallography, **1**: 327
- Dielectric constant, **6**: 92
- Electrical conductivity, **6**: 144
- Aqueous solution, **6**: 281
- Magnetic susceptibility, **6**: 362
- Melting point under pressure, **4**: 10
- Surface tension, **4**: 456
- Verdet constant, **6**: 429

-Acetone*

-Chloroacetic acid*

-Cineole*

-Ethyl alcohol*

-Ethyl ether*

-Glycerol*

- α -Naphthylamine

- Freezing point-solubility, **4**: 152

Guaiacol.—(Continued)

-Phenyl salicylate

- Freezing point-solubility, **4**: 152

-Picric acid

- Freezing point-solubility, **4**: 120

Guanajuatite. See Bismuth triselenide.**Guanidine, electrical conductivity, aqueous solution, 6: 261****Guanidine carbonate**

- Absorption spectra, **5**: 332
- Crystallography, **1**: 324
- Optical rotatory power, **7**: 354
- Refractive index, **7**: 29

Guanidine hydrochloride, absorption spectra, ultra-violet, 5: 364, 367**Guanidine nitrate**

- Heat of solution in water, **5**: 148

Guanidine sulfate

- Heat of solution in water, **5**: 148

Guanine, heat of combustion, 5: 167**Guatemala, weights and measures, 1: 5****Guejarite, density, 1: 123****Guillaume's metal, 2: 377****Guinea, weights and measures, 1: 8****Guitermanite, density, 1: 116****Gulonic acid, optical rotatory power, 7: 397****l-Gulonolactone**

- Heat of combustion, **5**: 166

Gum arabic, diffusion in water, 5: 72**Gummon**

- Dielectric strength, **2**: 310
- Electrical conductivity, **2**: 310
- Strength properties, **2**: 311

Gun metal, 2: 377; cf. 476, 559-572, 601

- British specifications, **2**: 387

- Thermal conductivity, **5**: 224

Guncotton, 7: 490**Gurley's metal, 2: 377****Gurney's bronze, 2: 377****Guthrie's alloy, 2: 377****Gutta-percha**

- Chemical composition, **2**: 294
- Dielectric constant, **2**: 273
- Electrical conductivity, **2**: 273
- Electrical properties, **2**: 294
- Physical properties, **2**: 294
- Power factor, **2**: 273
- Resins of, **2**: 294
- Softening point, **2**: 294
- Tensile properties, **2**: 294
- Thermal diffusivity, **2**: 315
- Viscosity, **2**: 294
- Vulcanization, **2**: 295
- Water absorption by, **2**: 294

Gypsum, 2: 122

- Compressibility, **3**: 50

- Density, **1**: 143

- Dielectric constant, **6**: 99

- Electrical conductivity, aqueous solution, **6**: 257

- Grating spaces, **6**: 7

- Magnetic susceptibility, **6**: 364

- Refractive index, **1**: 143, 169; **7**: 24

- Solution velocity in water, **5**: 59

- Thermal conductivity, **5**: 232

- Thermal diffusivity, **2**: 315

- Thermal expansion, **3**: 44

Gypsum tile

- Sound, transmission of, by, **6**: 459

Gyromagnetic effects, 6: 347**Gysinge steel**

- Electrical conductivity, **6**: 182

Hadfield manganese steel

- Electrical conductivity, **6**: 182

Hafnium

- Boiling point, **1**: 102

- Density, **2**: 456

- Electrons, thermal emission of, **6**: 53

- Emission spectra, **5**: 298

Hafnium.—(Continued)

- Melting point, **1**: 104
- Persistent lines, **5**: 323
- Thermionic work function, **6**: 53
- X-ray absorption limits, **6**: 41
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 41
- X-ray series, limiting frequencies, **6**: 35
- Hafnium oxide**
 - Magnetic susceptibility, **6**: 359
- Hafnium chloride**
 - Refractive index, **1**: 140, 166
- Haidingerite**
 - Density, **1**: 143
 - Refractive index, **1**: 143, 171
- Hair**
 - Density, **2**: 313
 - Thermal conductivity, **2**: 313
- Hair fibers**, **2**: 235
- Haiti**, weights and measures, **1**: 8
- Halberland alloy**, **2**: 377; *cf.* 469, 555
- Halite**. *See* Sodium chloride.
- Hall effect**, **6**: 415
 - Coefficient of, conversion factors, **1**: 30
- Halotrichite**
 - Density, **1**: 137
 - Refractive index, **1**: 137, 169
- Hambergite**
 - Density, **1**: 141
 - Refractive index, **1**: 141, 171; **7**: 23
- Hamilton metal**, **2**: 377
- Hammonia metal**, **2**: 377
- Hanksite**
 - Density, **1**: 158
 - Refractive index, **1**: 158, 166
- Hannayite**
 - Density, **1**: 141
 - Refractive index, **1**: 141, 170
- Hardite (alloy)**, **2**: 377
- Hardness**
 - Abrasive materials, **2**: 87
 - Building stones, **2**: 49
 - Metals and alloys, **2**: 478
 - Woods, **2**: 1
- Hardystonite**
 - Density, **1**: 144
 - Refractive index, **1**: 144, 167; **7**: 25
- Harlington bronze**, **2**: 377; *cf.* 470, 556
- Harmonia bronze**, **2**: 377; *cf.* 556
- Hauerite**
 - Density, **1**: 127
 - Refractive index, **1**: 127, 166
 - See also* Manganese disulfide.
- Häuyite**
 - Density, **1**: 154
 - Refractive index, **1**: 154, 165
- Hausmannite**
 - Density, **1**: 127
 - Refractive index, **1**: 127, 168
 - See also* Mangano-manganic oxide.
- Haynes metal**, **2**: 377
- Heat**
 - Convection, free and forced, **5**: 234
 - Conversion factors, **1**: 24
 - Definition, **1**: 37
 - Mechanical equivalent, **5**: 78
 - Spectral absorption, **5**: 268
- Heat capacity**, definition, **1**: 35
 - See also* Specific heat.
- Heat diffusivity**, definition, **1**: 36
- Heat of adsorption**, **5**: 139
- Heat of combustion**, **5**: 162
- Heat of compression**, **5**: 144
- Heat of diffusion**
 - Oxides in tungsten, **6**: 55–56
- Heat of dilution**, **5**: 160
 - Computation, **5**: 170
- Heat of dissociation of molecules**, **5**: 418
- Heat of expansion and extension**, **5**: 146
- Heat of formation**, **5**: 169
 - Formula for, **5**: 162

- Heat of fusion**, **1**: 103; **2**: 458; **4**: 9, 172; **5**: 130
- Heat of ionization**, **5**: 170; **6**: 53, 57, 69
- Heat of mixing**, **5**: 148
- Heat of neutralization**, **5**: 212
- Heat of reaction**, **5**: 170; **6**: 313
- Heat of solution**, **4**: 250; **5**: 148, 169
- Heat of transformation**, **2**: 458; **4**: 9; **5**: 169
 - Radioactive, **1**: 366
- Heat of transition**, **2**: 458; **5**: 169
- Heat of vaporization**, **1**: 102; **2**: 458; **3**: 201, 202, 204, 207, 255, 301, 324; **5**: 135
- Heat of wetting**, **5**: 142
- Heat transfer**, **5**: 234
- Heavy clay products**, **2**: 64
- Hebrew system**
 - Weights and measures, **1**: 15
- Hedenbergite**
 - Crystal nuclei, formation of, **5**: 60
 - Density, **1**: 145
 - Melting point, **1**: 145
 - Refractive index, **1**: 145, 172; **7**: 25
- Hefner candle**, **5**: 434
- Hefner lamp**, **5**: 434
 - Radiant power, **5**: 244
 - Temperature, **5**: 247
- Hefner unit**, definition, **1**: 37
- Hehner value**, definition, **2**: xii
- Heintzeite**
 - Density, **1**: 158
 - Refractive index, **1**: 158, 170
- Helium**
 - Accommodation coefficient, **5**: 53
 - Adsorption by wood charcoal, **3**: 250
 - Band spectra, **5**: 414, 417
 - Boiling point, **1**: 102; **3**: 203
 - Compressibility, **3**: 6
 - Critical constants, **1**: 102; **3**: 203, 248
 - Critical potentials, **6**: 71
 - Density
 - Gas, **1**: 102; **3**: 3
 - Liquid, **1**: 102; **3**: 20
 - Dielectric constant
 - Gas, **6**: 74
 - Liquid, **6**: 75
 - Dispersion formula, **7**: 11
 - Electron emission excited by positive ions, **6**: 65
 - Electrons, absorption of, by, **6**: 61
 - Electrons, attachment of, to form ions, **6**: 116
 - Electrons, motion of, in, **6**: 116
 - Electrons, secondary emission of, **6**: 63
 - Emission spectra, **5**: 298
 - Glass, permeability of, **5**: 76
 - Heat of adsorption on charcoal, **5**: 141
 - Heat of vaporization, **1**: 102; **5**: 135
 - Ion pairs produced by electrons, **6**: 121
 - Ionization by accelerated electrons, **6**: 121
 - Ionization by α -particles, **6**: 122
 - Ionization by electrons, **6**: 120
 - Ionization by positive residues, **6**: 122
 - Ions, mobility of, in, **6**: 111, 114
 - Isotopes, **1**: 45
 - Joule-Thomson effect, **5**: 144
 - Light, transmission of, by, **5**: 265
 - Magnetic susceptibility, **6**: 354, 355
 - Melting point, **1**: 104
 - Molecular data, **1**: 92
 - Orthobaric density, **3**: 203
 - Persistent lines, **5**: 323
 - Polarization of light scattered by, **5**: 265
 - Quantum numbers, **5**: 408
 - Refractivity, **7**: 7
 - Rubber, permeability of, **2**: 272; **5**: 76
 - Solubility in organic liquids, **3**: 262
 - Solubility in water, **3**: 256
 - Sound, velocity of, in, **6**: 462
 - Specific heat, **1**: 102, **5**: 80
 - Spectral series, **5**: 398

Helium.—(Continued)

- Surface tension, **4**: 441
- Thermal conductivity, **5**: 213, 214
- Thermal expansion, **3**: 6
- Vapor pressure, **3**: 203
- Virial coefficients, **3**: 7
- Viscosity, gas, **1**: 102; **5**: 2
- Zeeman effect, **5**: 420
- Argon*
 - Hydrogen
 - Viscosity, **5**: 4
- Helium tube, filter for, **5**: 272
- Helmet metal, **2**: 377; *cf.* 555, 601
- Helmholtz cell, **6**: 315
- Helvite, pyroelectricity, **6**: 209
- Hemafibrite**
 - Density, **1**: 127
 - Refractive index, **1**: 127, 173
- Hematin**, absorption spectra, **5**: 374; **7**: 207
- Hematinic acid anhydride**
 - Absorption spectra, **5**: 343, 373
 - Crystallography, **1**: 328
 - Electrical conductivity, aqueous solution, **6**: 286
- Hematinic acid imide**
 - Absorption spectra, **5**: 343, 373
 - Electrical conductivity, aqueous solution, **6**: 286
- Hematite**
 - Compressibility, **3**: 50
 - Curie point, **6**: 410
 - Density, **1**: 128
 - Magnetic properties, **6**: 414
 - Melting point, **1**: 128
 - Refractive index, **1**: 128, 168; **7**: 21
 - Thermal conductivity, **5**: 232
 - Thermal expansion, **3**: 43
 - See also* Ferric oxide.
- Hematoporphyrin dimethyl ether**
 - Absorption spectra, **5**: 374
- Hemimorphite**, refractive index, **7**: 20
- α -**Hemin**, absorption spectra, **5**: 379
- Hemipinic acid**
 - Absorption spectra, **5**: 346
 - Electrical conductivity, aqueous solution, **6**: 295
 - Heat of combustion, **5**: 166
- Hemipinimide**, heat of combustion, **5**: 168
- Hemit**
 - Dielectric strength, **2**: 310
 - Electrical conductivity, **2**: 310
 - Strength properties, **2**: 311
- Hemp**
 - Density, **2**: 237
 - Moisture content at various humidities, **2**: 323
 - Strength properties, **2**: 236
- Henequen fiber**, **2**: 236
- Henry**, definition, **1**: 37
- asym.*-**Heptachloropropane**
 - Cryoscopic constant, **4**: 183
- Heptadecane**
 - Density, **3**: 30, 34
 - Refractive index, **7**: 61
- Heptaldehyde**
 - Absorption spectra, **5**: 333
 - Birefringence, electric, **7**: 111
 - Magnetic susceptibility, **6**: 362
 - Solubility in water, **3**: 391
 - Specific heat, **5**: 111
 - Verdet constant, **6**: 429
- Heptane**
 - Absorption spectra, **5**: 333
 - Azeotropic mixtures, **3**: 319–320
 - Birefringence, electric, **7**: 111
 - Boiling point, **3**: 224
 - Compressibility, **3**: 37
 - Critical point data, **3**: 245, 249
 - Density, **3**: 29, 34
 - Dielectric constant, **6**: 82, 93, 105
 - Dielectric strength, **6**: 106

* Data for system will be found under this compound in Index. Full explanation on page vii.

Heptane.—(Continued)

- Electrical conductivity, **6**: 144
- Flash point, **2**: 161
- Heat of combustion, **5**: 163
- Heat of vaporization, **5**: 137
- Ignition temperature, **2**: 174
- Inflammability, limits of, **2**: 179
- Orthobaric density, **3**: 245
- Polarization of light scattered by
 - Gas, **5**: 266
 - Liquid, **5**: 267, 268
- Refractive index, **7**: 42
- Specific heat, **5**: 111
- Thermal conductivity, **5**: 228
- Vapor pressure, **3**: 224
- Vapor pressure above 1 atm., **3**: 245
- Verdet constant, **6**: 427, 429
- Viscosity, **5**: 27; **7**: 219
- X-rays, absorption coefficient, **6**: 14, 16
- Acetic acid*
- Acetone*
- Aniline*
- Benzene*
- α -Bromonaphthalene*
- Butane*
- Carbon disulfide*
- Carbon tetrachloride*
- Chlorobenzene*
- Chlorobenzoic acid (*o*-, *m*-, *p*-)*
- Chloroform*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl nitrate*
- Ethylene bromide*
- Iodine

- Density, **3**: 132
- Freezing point-solubility, **4**: 34
- Isoamyl alcohol
 - Heat of solution, **5**: 154
- Isobutyl alcohol
 - Heat of solution, **5**: 153
- Isobutyl chloride
 - Heat of solution, **5**: 153
- Methyl alcohol
 - Density, aqueous solution, **3**: 125
 - Heat of solution, **5**: 152
 - Miscibility in water, **3**: 411
- Naphthalene
 - Density, **3**: 190
- Pentane
 - Vapor pressure, **3**: 289
- Phenol
 - Solubility, mutual, **3**: 397
- Propyl alcohol
 - Heat of solution, **5**: 153
- Sulfur
 - Freezing point-solubility, **4**: 36
- Sulfur dioxide
 - Density, **3**: 135
 - Viscosity, **5**: 27
- Toluene
 - Density, **3**: 187
 - Dielectric constant, **6**: 103
 - Heat of solution, **5**: 154

1-Heptene

- Heat of combustion, **5**: 163
- Magnetic susceptibility, **6**: 362
- Refractive index, **7**: 41
- Solubility in water, **3**: 391

2-Heptene, magnetic susceptibility, **6**: 362**Heptoic acid**, electrical conductivity, aqueous solution, **6**: 283**Heptyl alcohol**

- Absorption spectra, **5**: 333, 342
- Birefringence, electric, **7**: 111
- Condensation on ions and nuclei, **6**: 117
- Critical temperature, **3**: 249
- Dielectric absorption, **6**: 93
- Dielectric constant, **6**: 93
- Heat of combustion, **5**: 164
- Heat of vaporization, **5**: 137

Heptyl alcohol.—(Continued)

- Refractive index, **7**: 42
- Verdet constant, dispersion of, **6**: 434
- Viscosity, **7**: 219
- sec.-Heptyl alcohol
 - Verdet constant, dispersion of, **6**: 434
- β -Heptyl esters
 - Optical rotatory power, **7**: 361
 - Viscosity, **7**: 220-222
- Heptyl oenanthate, Verdet constant, **6**: 431
- Heptylacetic acid
 - Heat of combustion, **5**: 166
- Heptylamine
 - Heat of combustion, **5**: 168
 - Surface tension, **4**: 457
- Ethyl ether*
- Xylene
 - Distribution coefficients in water, **3**: 430

Heptylene, specific heat, **5**: 111**Heptylic acid**

- Birefringence, electric, **7**: 111
- Boiling point, **3**: 224
- Density, **3**: 29
- Esterification constant, **7**: 138
- Heat of combustion, **5**: 165
- Refractive index, **7**: 42
- Solubility in water, **3**: 391
- Specific heat, **5**: 111
- Surface tension, **4**: 437, 457
 - Aqueous solution, **4**: 469
- Vapor pressure, **3**: 224
- Verdet constant, **6**: 429
- Viscosity, **7**: 219

Heptylic anhydride

- Heat of combustion, **5**: 166

Heptylmalonic acid

- Heat of combustion, **5**: 166

Hercules bronze, **2**: 377**Hercules metal**, **2**: 377**Hercynite**

- Density, **1**: 137
- Refractive index, **1**: 137, 165

Hessite

- Density, **1**: 124
- Melting point, **1**: 124
- See also Silver telluride.

Heulandite

- Dehydration behavior, **7**: 312
- Density, **1**: 145
- Heat of formation, **5**: 197
- Refractive index, **1**: 145, 169

Heusler's alloy, **2**: 377

- Curie point, **6**: 410
- Ettingshausen effect, **6**: 420
- Hall effect, **6**: 417
- Joule effect, **6**: 440
- Kerr effect, **6**: 436
- Magnetic properties, **6**: 407
- Magnetization by rotation, **6**: 347
- Nernst effect, **6**: 421
- Rotation by magnetization, **6**: 347
- Specific heat, **5**: 121

Hewettite

- Density, **1**: 145
- Refractive index, **1**: 173

Hexabromoethane

- Crystallography, **1**: 324
- Magnetic susceptibility, **6**: 361

Hexachlorobenzene

- Absorption spectra, **5**: 338
- Cryoscopic constant, **4**: 183
- Diffusion in methyl alcohol, **5**: 72
- Magnetic susceptibility, **6**: 362

Hexachlorodisiloxane

- Vapor pressure, **3**: 214

Hexachloroethane

- Absorption spectra, **5**: 335
- Allotropic forms, **4**: 14
- Azeotropic mixtures, **3**: 319
- Compressibility differences, **4**: 14

Hexachloroethane.—(Continued)

- Crystallography, **1**: 324
- Magnetic susceptibility, **6**: 361
- Melting point under pressure, **4**: 14
- Specific heat, **5**: 101
- Transition temperature, **4**: 8
- Viscosity, **7**: 213
- Volume change on melting, **4**: 14
- Chlorine*
- Naphthalene
 - Freezing point-solubility, **4**: 101
- Phenanthrene
 - Freezing point-solubility, **4**: 101
- Phosgene
 - Boiling point elevation, **3**: 330
- Toluene
 - Specific heat, **5**: 126
- Hexachlorohexanetrione
 - Magnetic susceptibility, **6**: 362
- Hexachloro- β -ketohydronaphthalene
 - Refractive index, **7**: 30
- Hexachloro- α -keto- γ -*R*-pentene
 - Pentachloromonobromo- α -keto- γ -*R*-pentene
 - Freezing point-solubility, **4**: 116
- Hexachlorosilicoethane
 - Magnetic susceptibility, **6**: 356
- Hexacontane, surface tension, **4**: 463
- Hexacosane, surface tension, **4**: 463
- Hexadecane
 - Absorption spectra, **5**: 334
 - Compressibility, **3**: 37
 - Density, **3**: 30, 34
 - Heat of combustion, **5**: 164
 - Specific heat
 - Liquid, **5**: 113
 - Solid, **5**: 105
 - Viscosity, **7**: 222
- Hexadecyl alcohol
 - "Surface vapor pressure," **4**: 476
- 1, 5-Hexadiene**
 - Azeotropic mixtures, **3**: 319-320
 - Specific heat, **5**: 110
 - Surface tension, **4**: 454
- 1, 5-Hexadiene**, heat of combustion, **5**: 163
- 2, 4-Hexadiene**
 - Absorption spectra, **5**: 340
 - Heat of combustion, **5**: 163
- Hexahydrate, density, **1**: 141
- Hexahydrobenzoic acid
 - Electrical conductivity, aqueous solution, **6**: 282
 - Heat of combustion, **5**: 165
 - Magnetic susceptibility, **6**: 362
 - Viscosity, **7**: 219
- o*-Hexahydrocresol
 - Density, **3**: 29
 - Specific heat, **5**: 111
 - Viscosity, **7**: 219
- m*-Hexahydrocresol
 - Specific heat, **5**: 111
 - Viscosity, **7**: 219
- p*-Hexahydrocresol
 - Specific heat, **5**: 111
 - Viscosity, **7**: 219
- Hexahydrocresols
 - Benzene*
 - Chloroform*
 - Ethyl acetate*
 - Methyl alcohol
 - Vapor pressure, **3**: 287
- Hexahydrocumaric acid
 - Heat of combustion, **5**: 166
- Hexahydromellitic acid
 - Heat of combustion, **5**: 166
- Hexahydronaphthalene
 - Heat of combustion, **5**: 163
 - Refractive index, **7**: 51
- Hexahydrophenol
 - Acetone*
 - Benzene*
 - Chloroform*

Hexahydrophenol.—(Continued)

- Ethyl acetate*
- Methyl alcohol
- Vapor pressure, **3**: 287
- Hexahydrophthalic acid**, electrical conductivity, aqueous solution, **6**: 287
- Hexahydrophthalic anhydride**
- Heat of combustion, **5**: 166
- Hexahydroterephthalic acid**
- Crystallography, **1**: 328
- Electrical conductivity, aqueous solution, **6**: 287
- Heat of combustion, **5**: 165
- Hexahydro-*m*-toluic acid**
- Heat of combustion, **5**: 165
- Hexamethylbenzene**
- Heat of combustion, **5**: 164
- Hexamethylene**
- Heat of wetting by, **5**: 142
- Hexamethylenetetramine**
- Diffusion in water, **5**: 71
- Heat of combustion, **5**: 168
- Heat of solution in water, **5**: 150
- Rubber vulcanization, use in, **2**: 282
- Hexamethylenetetramine hydrochloride**
- Heat of solution in water, **5**: 150
- Hexamethylenetetramine nitrates**
- Heat of solution in water, **5**: 150
- Hexamethylenetetramine sulfate**
- Heat of solution in water, **5**: 150
- Hexamethylethane**
- Heat of combustion, **5**: 163
- Hexamine cobaltic hexacyano cobaltate**
- Solubility in aqueous solutions, **7**: 334
- Hexamine cobaltic hexacyano ferriate**
- Solubility in aqueous solutions, **7**: 331
- Hexamine cobaltic oxalodinitrodiammine cobaltate**
- Solubility in aqueous solutions, **7**: 335
- Hexamine cobaltic tetranitrodiammine cobaltate**
- Solubility in aqueous solutions, **7**: 335
- Hexamine cobaltic trioxalocobaltate**
- Solubility in aqueous solutions, **7**: 334
- Hexane**
- Absorption spectra, **5**: 332
- Azeotropic mixtures, **3**: 319–321, 323
- Birefringence, electric, **7**: 111
- Boiling point, **3**: 222, 346
- Compressibility, **3**: 36
- Critical point data, **3**: 244, 249
- Density, **3**: 29, 33
- Dielectric constant, **6**: 91, 105
- Dielectric strength, **6**: 106
- Electrical conductivity, **6**: 144
- Electrical ignition, **2**: 175
- Explosion in closed vessels, **2**: 192
- Flash point, **2**: 161
- Heat of combustion, **5**: 163
- Heat of wetting by, **5**: 142
- Heat of vaporization, **5**: 137
- Ignition temperature, **2**: 174
- Inflammability, limits of, **2**: 179
- Ions, mobility of, in, **6**: 112
- Magnetic susceptibility, **6**: 362
- Orthobaric density, **3**: 244
- Polarization of light scattered by
- Gas, **5**: 266
- Liquid, **5**: 267
- Refractive index, **7**: 40
- Sound, velocity of
- Gas, **6**: 463
- Liquid, **6**: 464
- Specific heat
- Gas, **5**: 81
- Liquid, **5**: 110
- Surface tension, **4**: 437, 455
- Thermal conductivity
- Gas, **5**: 214, 215
- Liquid, **5**: 228
- Vapor pressure, **3**: 222

Hexane.—(Continued)

- Vapor pressure above 1 atm., **3**: 244
- Verdet constant, dispersion of, **6**: 433, 434
- Viscosity, **3**: 45, 49; **7**: 218, 223
- Acenaphthene*
- Acetic acid*
- Acetone*
- Aniline*
- Azobenzene*
- Benzene*
- Camphor*
- Cyclohexane*
- p*-Dibromobenzene*
- Diisooamyl*
- Diphenyl*
- Durene*
- Ethyl acetate*
- Ethyl acetoacetate*
- Ethyl alcohol*
- Ethyl butyrate*
- Ethyl chloroacetate*
- Ethyl iodide*
- Ethyl isobutyrate*
- Ethyl trichloroacetate*
- Ethylene bromide*
- Iodine
- Freezing point-solubility, **4**: 34
- Isoamyl alcohol
- Density, **3**: 173
- Viscosity, **5**: 43
- Isohexane
- Density, **3**: 186
- Isopentane
- Density, **3**: 173
- Methyl alcohol
- Density, aqueous solution, **3**: 125
- Miscibility in water, **3**: 411
- Solubility, mutual, **3**: 395, 397
- Vapor pressure, **3**: 287, 360
- Methyl formate
- Density, **3**: 157
- Methylene iodide
- Solubility, mutual, **3**: 397
- Naphthalene
- Density, **3**: 186
- Freezing point-solubility, **4**: 178
- Nitrobenzene
- Boiling point, **3**: 314
- Boiling point elevation, **3**: 346
- Solubility, mutual, **3**: 396, 397
- Vapor pressure, **3**: 361
- Viscosity, **5**: 45
- m*-Nitrotoluene
- Density, **7**: 85
- Refractive index, **7**: 85
- Dispersion, **7**: 105
- Octane
- Density, **3**: 186
- Vapor pressure, **3**: 289
- Palmitic acid
- Density, **3**: 186
- Phenol
- Solubility, mutual, **3**: 396
- Pinene hydrochloride
- Density, **3**: 186
- Propyl butyrate
- Density, **3**: 186
- Stearic acid
- Density, **3**: 186
- Sulfur
- Freezing point-solubility, **4**: 35
- Sulfur dioxide
- Solubility, mutual, **3**: 394
- Pressure, effect of, **3**: 394
- Tetrahydronaphthalene
- Vapor pressure, **3**: 289
- Viscosity, **5**: 49
- m*-Toluidine
- Density, **7**: 85
- Refractive index, **7**: 85
- Dispersion, **7**: 105

Hexane.—(Continued)

- Triphenylmethane
- Density, **3**: 186
- Water
- Boiling points, **3**: 363, 382
- Dew points, **3**: 364
- Hexanitrodiphenylamine**
- Pyridine
- Boiling point elevation, **3**: 342
- 2, 4, 6-Trinitrotoluene
- Freezing point-solubility, **4**: 146
- Hexaphenyldistannane**, density, **3**: 44
- Hexene**, magnetic susceptibility, **6**: 362
- α , β -Hexenic acid
- Electrical conductivity, aqueous solution, **6**: 275
- Refractive index, **7**: 39
- Hexoic acid**
- Benzene*
- Hexyl alcohol**
- Absorption spectra, **5**: 332, 340
- Diffusion of vapor in gases, **5**: 62
- Magnetic susceptibility, **6**: 362
- Viscosity, **7**: 218
- sec.-Hexyl alcohol
- Verdet constant, dispersion of, **6**: 434
- β -Hexyl esters
- Optical rotatory power, **7**: 361
- Viscosity, **7**: 220–222
- Hexyl iodide**, dielectric constant, **6**: 91
- sec.-Hexyl iodide
- Verdet constant, **6**: 429
- Hexylacetylene**
- Surface tension, **4**: 458
- Viscosity, **7**: 219
- Verdet constant, **6**: 429
- Hexylamine**
- Heat of combustion, **5**: 168
- Surface tension, **4**: 455
- Xylene
- Distribution coefficients in water, **3**: 429
- Hexylene**
- Absorption spectra, **5**: 340
- Dielectric constant, **6**: 91
- Heat of combustion, **5**: 163
- Heat of vaporization, **5**: 137
- Refractive index, **7**: 40
- Specific heat, **5**: 110
- Thermal conductivity, gas, **5**: 214, 215
- Verdet constant, **6**: 429
- Hexylpropargyl alcohol**
- Heat of combustion, **5**: 164
- Hexylpropiolamide**
- Magnetic susceptibility, **6**: 363
- Hexylpropiolic acid**
- Heat of combustion, **5**: 165
- Verdet constant, **6**: 430
- Hibiscus fiber**, **2**: 236
- Hibschite**
- Density, **1**: 145
- Refractive index, **1**: 145, 165
- Hieratite**. See Potassium fluosilicate.
- Higginsite**
- Density, **1**: 144
- Refractive index, **1**: 144, 173
- Hillebrandite**
- Density, **1**: 144
- Refractive index, **1**: 144, 171
- Hindu system**, weights and measures, **1**: 15
- Hinsdalite**
- Density, **1**: 137
- Refractive index, **1**: 137, 172
- Hippuric acid**
- Absorption spectra, ultra-violet, **5**: 344, 366
- Crystallography, **1**: 328
- Heat of combustion, **5**: 168
- Surface tension, aqueous solution, **4**: 470
- Ethyl ether*
- Formic acid*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Hippuric acid.—(Continued)-*Potassium hippurate*Freezing point-solubility in water, **4**: 377-*Sodium hippurate*Freezing point-solubility in water, **4**: 421**Histidine**Absorption spectra, **5**: 373Electrical conductivity, aqueous solution, **6**: 275Optical rotatory power, **7**: 375**Hoernesite**Density, **1**: 141Refractive index, **1**: 141, 170**Hofmann violet**, refractive index, **7**: 12, 15**Hollow tile ceiling**Thermal conductivity, **2**: 315**Holmium**Cathodoluminescence, **5**: 390Emission spectra, **5**: 299Persistent lines, **5**: 323X-ray absorption limits, **6**: 40X-ray emission spectra, **6**: 40X-ray series, limiting frequencies, **6**: 35**Holmium chloride**Absorption spectra, solutions, **5**: 329Magnetic susceptibility, **6**: 359**Holmium nitrate**Absorption spectra, solutions, **5**: 329Magnetic susceptibility, **6**: 359**Holmium oxide**Magnetic susceptibility, **6**: 359**Holtzer crucible steel**Electrical conductivity, **6**: 200**Homoatropine**Absorption spectra, **5**: 334, 367**Homonataloin**Optical rotatory power, **7**: 386, 463**Homophthalic acid**Electrical conductivity, aqueous solution, **6**: 290-*Ethyl ether****Homopyrocatechol**, Verdet constant, **6**: 429**Honduras**, weights and measures, **1**: 5**Hooker brass**, **2**: 377; cf. 469, 602 **α -Hopeite**Density, **1**: 119Refractive index, **1**: 119, 171Transformation point, **1**: 119 **β -Hopeite**Density, **1**: 119Refractive index, **1**: 119, 171Transformation point, **1**: 119**Hopkinson's alloy**, **2**: 377; cf. 481**Horn fiber**. See Vulcanized fiber.**Hornblende**Magnetic susceptibility, **6**: 364Refractive index, **7**: 25Thermal conductivity, **5**: 232**Horns**, **6**: 457**Horsepower**, definition, **1**: 37**Hot-cathode tubes**, **6**: 58**Howlite**Density, **1**: 145Refractive index, **1**: 145, 171**Hoyle's metal**, **2**: 377; cf. 557**Hoyt metal**, **2**: 377; cf. 557**Hübnerite**Density, **1**: 134Refractive index, **1**: 134, 173**Humidity**Body effects, **2**: 325Constant, laboratory methods for, **1**: 67; **3**: 385Definition, **1**: 37Relative, **1**: 71**Humite**Density, **1**: 142Refractive index, **1**: 142, 171**Hungary**, weights and measures, **1**: 3**Hureaulite**Density, **1**: 127Refractive index, **1**: 127, 172**Huron metal**, **2**: 377; cf. 534, 536**Husmann metal**, **2**: 377**Hussakite**, refractive index, **7**: 23**Hutchinsonite**, refractive index, **7**: 21**Hyalite**, dehydration behavior, **7**: 313**Hydantoic acid**Heat of combustion, **5**: 167Heat of solution in water, **5**: 148**Hydantoin**Electrical conductivity, aqueous solution, **6**: 263Heat of combustion, **5**: 167Heat of solution in water, **5**: 148**Hydnocarpic acid**Optical rotatory power, **7**: 466**Hydrastine**Absorption spectra, **5**: 354Optical rotatory power, **7**: 432**Hydrates**, decomposition pressures, **7**: 224**Hydration value of ions**, **6**: 311**Hydratropaldehyde**Birefringence, electric, **7**: 111**Hydratropic acid**Electrical conductivity, aqueous solution, **6**: 291Solubility in water, **3**: 392Vapor pressure, **3**: 225**Hydraulic cements**, **2**: 117**Hydrazine**Boiling point, **1**: 108, 162; **3**: 229Critical point data, **3**: 229, 249Density, **1**: 108Aqueous solution, **3**: 55Electrical conductivity, aqueous solution, **6**: 260Heat of formation, **5**: 178Melting point, **1**: 108Refractive index, **1**: 108, 165Vapor pressure above 1 atm., **3**: 229X-rays, absorption coefficients, **6**: 13, 16-*Ammonia**-*Benzene****Hydrazine hydrochlorides**Density, aqueous solution, **3**: 60Heat of formation, **5**: 179**Hydrazine nitrate**Heat of formation, **5**: 179Solubility in water, **4**: 218**Hydrazine sulfate**Heat of formation, **5**: 179Optical rotatory power, **7**: 353Solubility in water, **4**: 218**Hydrazoanisole**-*Benzene****Hydrazobenzene**Absorption spectra, **5**: 348Decomposition, kinetics of, **7**: 121Heat of combustion, **5**: 168Heat of fusion, **5**: 134-*Azobenzene**-*Benzalaniline**-*Benzene**-*Benzoin**-*Benzylaniline**-*Dibenzyl**-*Stilbene*Freezing point-solubility, **4**: 161-*Tolane*Freezing point-solubility, **4**: 161**Hydrazocumic acid**, heat of solution in water, **5**: 150**Hydrazoic acid**Electrical conductivity, aqueous solution, **6**: 260Heat of formation, **5**: 178Ionization constants, **7**: 241**Hydrazotoluene**-*Benzene****Hydrinden-1, 2-diol**Heat of combustion, **5**: 164**Hydrindene**Birefringence, magnetic, **7**: 111Magnetic susceptibility, **6**: 363Refractive index, **7**: 46Verdet constant, **6**: 430**Hydrindone**Refractive index, **7**: 46Verdet constant, **6**: 430**Hydriodic acid**Activity coefficient, **7**: 235Boiling point, maximum, **3**: 323Decomposition, kinetics of, **7**: 117Density, **3**: 55, 107Electrical conductivity, aqueous solution, **6**: 241, 242Free energy, **7**: 235Heat of neutralization, **5**: 212Vapor pressure, **7**: 235Partial, **3**: 306

See also Hydrogen iodide.

-*Ammonium iodide**-*Potassium iodide*Density, aqueous solution, **3**: 96-*Sodium iodide*Density, aqueous solution, **3**: 96-*Strontium chloride*Density, aqueous solution, **3**: 96**Hydrobenzoin**Heat of combustion, **5**: 164-*Benzil****Hydroboracite**Density, **1**: 146Refractive index, **1**: 146, 170**Hydrobromic acid**Activity coefficient, **7**: 234Boiling point, **3**: 309, 323Compressibility, **3**: 439Cryoscopic constant, **4**: 214Density, **3**: 55, 107Electrical conductivity, **6**: 241, 242Formation, kinetics of, **7**: 117Free energy, **7**: 234Heat of formation, **5**: 177Heat of neutralization, **5**: 212Heat of transition, **5**: 177Refractive index, **7**: 65Specific heat, **5**: 122Vapor pressure, **3**: 306, 361; **7**: 234Verdet constant, **6**: 426Viscosity, **5**: 12

See also Hydrogen bromide.

Hydrocarbon oilsComposition, chemical, **2**: 156Critical solution temperature in alcohol, **2**: 156Density, **2**: 156Fire point, **2**: 156Flash point, **2**: 156Index of refraction, **2**: 156Solubility index, **2**: 156Turbidity temperature in acetic anhydride, **2**: 156**Hydrocarbons, aliphatic**X-ray diffraction data, **1**: 347**Hydrocarbostyryl**, refractive index, **7**: 30**Hydrocerusite**Density, **1**: 117Refractive index, **1**: 117, 167**Hydrochinotoxine**Absorption spectra, **5**: 379**Hydrochloric acid**Absorption spectra, **5**: 329Adsorption on wool, **3**: 252Activity coefficient, **7**: 233Boiling point, **3**: 309, 323Compressibility, **3**: 439Density, **3**: 54, 107Saturated, **3**: 104Electrical conductivity, **6**: 241, 242

* Data for system will be found under this compound in Index. Full explanation on page vii.

Hydrochloric acid.—(Continued)

- Free energy, 7: 233
 Freezing mixtures, use in, 1: 64
 Heat of formation, 5: 212
 Heat of neutralization, 5: 212
 Magnetic rotatory power, 6: 431
 Refractive index, 7: 65
 Sound, velocity of, in, 6: 464
 Specific heat, 5: 115; 7: 233
 Surface tension, 4: 464
 Thermal conductivity, 5: 229
 Vapor pressure, 3: 301, 361
 Vapor pressure, partial, 3: 261, 301
 Verdet constant, 6: 426
 Viscosity, 5: 12
 X-ray diffraction data, 1: 341
See also Hydrogen chloride.
 -Ammonium sulfate*
 -Barium sulfate*
 -Bismuth oxychloride*
 -Cupric sulfate*
 -Cuprous chloride*
 -Decylic acid*
 -Nickel
 Equilibrium constant of reaction, 7: 283
 -Nicotine
 Miscibility of, 3: 409
Hydrocinchonine sulfate
 Optical rotatory power, 7: 354
Hydrocinnamic acid
 Crystallization velocity, 5: 61
 Electrical conductivity, aqueous solution, 6: 291
 Heat of combustion, 5: 165
 Heat of fusion, 5: 134
 -Chloroform*
 -Dimethylpyrone*
 -Phenylacetic acid
 Freezing point-solubility, 4: 180
 -Xylene
 Distribution coefficients in water, 3: 431

Hydrocupreine, absorption spectra, 5: 370

Hydrocyanic acid. *See* Hydrogen cyanide.

Hydrocyanite. *See* Cupric sulfate.

Hydrofluoric acid

- Boiling point, maximum, 3: 323
 Density, 3: 54
 Free energy
 Ionization, 7: 232
 Reaction with fluoride ion, 7: 232
 Ionization constant, 7: 232
See also Hydrogen fluoride.

Hydrofluosilicic acid, freezing point lowering of aqueous solution, 4: 255

Hydrofluotitanic acid

Heat of formation, 5: 182

Hydrogen

- Accommodation coefficient, 5: 53
 Adsorption by charcoal, 3: 251
 Adsorption by iridium black, 3: 253
 Adsorption by palladium black, 3: 253
 Adsorption by palladium copper alloy, 3: 253
 Adsorption by palladium silver alloy, 3: 253
 Adsorption on platinum black, 3: 253
 Adsorption on rhodium black, 3: 253
 Band spectra, 5: 414, 417
 Boiling point, 1: 53, 102; 3: 203
 Compressibility
 Gas, 3: 6
 Solid, 3: 46
 Contact potential, 6: 57
 Copper, permeability of, 5: 76
 Critical constants, 1: 102; 3: 203, 248
 Critical potentials, 6: 71, 72
 Density
 Gas, 1: 102; 3: 3
 Liquid, 1: 102; 3: 20
 Solid, 1: 104; 3: 21

Hydrogen.—(Continued)

- Detonation, 2: 185
 Dielectric constant
 Gas, 6: 74, 79
 Liquid, 6: 75
 Solid, 6: 75
 Diffusion in water, 5: 63
 Dispersion formulas, 7: 11
 Dissociation, work of, 6: 72
 Dissymetry in emission of electrons freed by X-rays, 6: 5
 Electrode potential, 6: 320, 322
 Electrode potential against hydroxide ion, 7: 231
 Electron emission excited by positive ions, 6: 65
 Electrons, absorption of, by, 6: 61
 Electrons, attachment of, to form ions, 6: 116
 Electrons, motion of, in, 6: 116
 Electrons, secondary emission of, 6: 63
 Electrons, thermal emission, effect on, 6: 55
 Emission spectra, 5: 298
 Entropy, 5: 88
 Explosion in closed vessels, 2: 187
 Explosive mixtures, limiting dilutions, 2: 186
 Flame propagation in, 2: 182
 Free energy
 Dissociation, 7: 231
 In water, 7: 231
 Reaction with bromine, 7: 234
 Reaction with carbon dioxide, 7: 243, 244
 Reaction with carbon monoxide, 7: 244
 Reaction with fluorine, 7: 232
 Reaction with graphite, 7: 244
 Reaction with iodine, 7: 235
 Reaction with nitrogen, 7: 239
 Reaction with oxygen, 7: 231
 Reaction with sulfur, 7: 237
 Reaction with sulfur dioxide, 7: 237
 Gamma rays, absorption coefficient, 6: 21
 Glass, permeability of, 5: 76
 Heat content, 5: 88
 Heat of adsorption on charcoal, 5: 141
 Heat of adsorption on metals, 5: 141
 Heat of dissociation, 5: 418
 Heat of fusion, 1: 104; 5: 131
 Heat of vaporization, 1: 102; 5: 135
 Igniting pressures, relative limiting, 2: 181
 Ignition temperature, 2: 173
 Inflammability, limits of, 2: 176
 Ion pairs produced by electrons, 6: 121
 Ionization, atomic, 6: 122
 Ionization by accelerated electrons, 6: 121
 Ionization by electrons, 6: 120
 Ionization by α -particles, 6: 122
 Ionization by β -particles, 6: 121
 Ionization by γ -rays, 6: 123
 Ionization by phosphorus vapor, 6: 124
 Ionization by positive residues, 6: 122
 Ionization by X-rays, 6: 123
 Ions, mobility of, in, 6: 111, 114
 Ions, recombination of, in, 6: 115
 Iron, permeability of, 5: 76
 Isotopes, 1: 45
 Joule-Thomson effect, 5: 144
 Light, transmission of, by, 5: 265
 Magnetic susceptibility, 6: 354, 355
 Magnetron number, 6: 346
 Melting point, 1: 104
 Metals, permeability of, to, 5: 76
 Molecular data, 1: 92
 Nickel, permeability of, 5: 76
 Orbits, 1: 48

Hydrogen.—(Continued)

- Orthobaric density, 3: 203
 Overvoltage, 6: 339
 Palladium, permeability of, 5: 76
 Persistent lines, 5: 323
 Platinum, permeability of, 5: 76
 Polarization of light scattered by, 5: 265
 Quantum numbers, 5: 408
 Rate of flow at low pressure, 1: 92
 Refractive index
 Gas, 7: 6
 Liquid, 1: 103; 7: 11
 Rubber, permeability of, to, 2: 272; 5: 76
 Solubility in
 Aluminum, molten, 3: 270
 Aqueous solutions, 3: 272
 Colloidal solutions, 3: 281
 Copper, molten, 3: 270
 Iron, molten, 3: 270
 Nickel, molten, 3: 270
 Non-aqueous liquids, 3: 261
 Tin, molten, 3: 270
 Water, 3: 256
 Sound, velocity of, in, 6: 462
 Sound, velocity of, in tubes, 6: 466
 Specific heat
 Gas, 1: 102; 5: 80, 82, 85; 7: 231
 Liquid, 1: 103; 5: 85, 88
 Saturated vapor, 5: 83
 Solid, 1: 104; 5: 85, 88
 Spectral series, 5: 398
 Surface tension, 1: 103; 4: 441
 Thermal conductivity, 5: 213, 214
 Molecular, 5: 215
 Thermal expansion
 Gas, 3: 4
 Liquid, 1: 102; 3: 20
 Thermochemistry, 5: 176
 Thermodynamic potential, 5: 88
 Triple point, 3: 203
 Vapor pressure, 3: 203
 Verdet constant, 6: 425
 Dispersion, 6: 432
 Virial coefficients, 3: 5
 Viscosity
 Gas, 1: 102; 5: 2
 Liquid, 7: 212
 X-rays, absorption coefficient, 6: 13, 15, 16
 Zeeman effect, 5: 420
 Zinc, permeability of, 5: 76
 -Acetylene*
 -Air*
 -Ammonia*
 -Argon*
 -Benzene*
 -Bromine*
 -Carbon dioxide*
 -Carbon monoxide*
 -Chlorine*
 -Ethane*
 -Ethyl ether*
 -Ethylene*
 -Helium*
 -Hydrogen sulfide
 Ions, mobility of, in, 6: 113
 -Methane
 Detonation, 2: 186
 Diffusion coefficient, 5: 62
 Viscosity, 5: 5
 -Methyl iodide
 Ions, mobility of, in, 6: 113
 -Nickel chloride
 Equilibrium constant of reaction, 7: 283
 -Nitric oxide
 Viscosity, 5: 5
 -Nitrogen
 Dielectric constant, 6: 83
 Diffusion coefficient, 5: 62
 Equilibrium constants of reaction, 7: 239

* Data for system will be found under this compound in Index. Full explanation on page vii.

Hydrogen**-Nitrogen.—(Continued)**

- P-V-T relations, **3: 17**
- Thermal conductivity, **5: 214**
- Viscosity, **5: 5**

-Nitrous oxide

- Diffusion coefficient, **5: 62**
- Viscosity, **5: 5**

-Oxygen

- Diffusion coefficient, **5: 62**
- Ions, mobility of, in, **6: 112**
- Photochemical reaction, **7: 164**
- Sound, velocity of, in, **6: 463**
- Thermal conductivity, **5: 214**
- Viscosity, **5: 5**

-Palladium

- Elasticity, **2: 588**
- X-ray diffraction data, **1: 349**

-Stannous oxide

- Equilibrium constant **7: 247**

-Sulfur

- Photochemical reaction, **7: 164**

-Sulfur dioxide

- Diffusion coefficient, **5: 62**
- Viscosity, **5: 5**

Hydrogen atom, mass, 1: 18**Hydrogen bromide**

Aqueous solutions. *See* Hydrobromic acid.

- Band spectra, **5: 414**
- Boiling point, **1: 106, 162; 3: 228, 328**
- Concentration cells, **6: 323**
- Critical point data, **3: 228, 248**
- Critical potentials, **6: 72**
- Decomposition pressure of hydrates, **7: 235**
- Density
 - Aqueous solution, **3: 55**
 - Gas, **3: 3**
 - Liquid, **1: 106; 3: 22**
- Dielectric constant
 - Gas, **6: 74**
 - Liquid, **6: 76**
- Dispersion formula, **7: 11**
- Electrical conductivity, **6: 142**
 - Aqueous solution, **6: 241, 242**
- Free energy, **7: 234**
 - Formation, **7: 234**
- Freezing point lowering of aqueous solution, **4: 254**
- Heat of fusion, **5: 131**
- Heat of vaporization, **5: 136**
- Ionization by α -particles, **6: 122**
- Melting point, **1: 106**
- Orthobaric density, **3: 228**
- Photochemical decomposition, **7: 164, 166**
 - Quantum sensitivity, **7: 168**
- Photochemical formation, **7: 166**
- Refractive index
 - Aqueous solution, **7: 65**
 - Gas, **7: 8**
 - Liquid, **1: 106, 165**
- Solubility in aqueous sulfur dioxide, **3: 403**
- Solubility in water, **3: 258; 4: 217**
- Sound, velocity of, in, **6: 462**
- Specific heat
 - Aqueous solution, **5: 122**
 - Gas, **5: 80, 81; 7: 234**
 - Liquid, **5: 86**
 - Solid, **5: 86**
- Surface tension, aqueous solution, **4: 464**
- Transmission of radiant energy, **5: 270**
- Vapor pressure
 - Aqueous solution, **3: 361**
 - Liquid, **3: 213**
 - Solid, **3: 207**
- Vapor pressure above 1 atm., **3: 228**
- Verdet constant
 - Aqueous solution, **6: 426**
 - Liquid, **6: 426**

Hydrogen bromide.—(Continued)**Viscosity**

- Aqueous solution, **5: 12**
- Gas, **5: 3**

-Acetone***-Acetylene*****-Allylene*****-Ammonium bromide*****-Benzene*****-Bromine*****-Ethyl acetate*****-Ethyl alcohol*****-Ethyl ether*****-Ethylbenzene*****-Hydrogen sulfide**

- Freezing point-solubility, **4: 42**
- Vapor pressure, **3: 354**

-Lead bromide

- Solubility in water, **7: 317**

-Mesitylene

- Freezing point-solubility, **4: 187**

-Methyl alcohol

- Freezing point-solubility, **4: 186**
- Viscosity, aqueous solution, **5: 24**

-Methyl chloride

- Freezing point-solubility, **4: 186**

-Methyl ether

- Freezing point-solubility, **4: 186**

-Methylcyclohexane

- Freezing point-solubility, **4: 187**

-Potassium bromide

- Density, aqueous solution, **3: 96**

-Potassium chloride

- Freezing point-solubility in water, **4: 275**

-Propylbenzene

- Freezing point-solubility, **4: 187**

-Sodium bromide

- Density, aqueous solution, **3: 96**

-Strontium chloride

- Density, aqueous solution, **3: 96**
- Freezing point-solubility in water, **4: 275**

-Succinic acid

- Freezing point-solubility in water, **4: 397**

-Sulfur dioxide

- Vapor pressure, **3: 354**

-Toluene

- Boiling point elevation, **3: 328**
- Freezing point-solubility, **4: 187**

-Uranyl nitrate

- Density, aqueous solution, **3: 96**

-Xylene (o-, m-, p-)

- Freezing point-solubility, **4: 187**

Hydrogen chloride

- Absorption spectra, **5: 327**

Aqueous solutions. *See* Hydrochloric acid.

- Band spectra, **5: 414**

- Boiling point, **1: 106, 162; 3: 228, 328**

- Concentration cells, **6: 322**

- Critical point data, **3: 228, 248**

- Critical potentials, **6: 72**

- Decomposition pressure of hydrate, **7: 233**

Density

- Aqueous solution, **3: 54, 104**
- Gas, **3: 3**
- Liquid, **1: 106; 3: 22**

Dielectric constant

- Gas, **6: 74**
- Liquid, **6: 76**

- Diffusion in ethyl alcohol, **5: 73**

- Diffusion in water, **5: 64**

- Dispersion formula, **7: 11**

- Dissociation, **7: 233**

- Electrical conductivity, **6: 142**

- Aqueous solution, **6: 241, 242**

- Electrons, secondary emission, **6: 63**

Hydrogen chloride.—(Continued)

- Free energy, **7: 233**

- Oxidation, **7: 233**

- Reaction with silver, **7: 265**

- Freezing point lowering of aqueous solution, **4: 254**

- Heat content, **7: 233**

- Heat of formation, **5: 176**

- Aqueous solution, **5: 212**

- Heat of fusion, **5: 131**

- Heat of neutralization, **5: 212**

- Heat of transition, **5: 176**

- Heat of vaporization, **5: 136**

- Ionization by accelerated electrons, **6: 121**

- Ionization by α -particles, **6: 122**

- Ions, mobility of, in, **6: 111**

- Magnetic susceptibility, **6: 356**

- Melting point, **1: 106**

- Orthobaric density, **3: 228**

- Photochemical decomposition, **7: 166**

- Polarization of light scattered by, **5: 265**

Refractive index

- Aqueous solution, **7: 65**

- Gas, **7: 8**

- Liquid, **1: 106, 165**

Solubility in

- Ethyl alcohol, **3: 274**

- Non-aqueous liquids, **3: 264**

- Sulfuric acid, **3: 273**

- Water, **3: 258; 4: 216**

Sound, velocity of

- Aqueous solution, **6: 464**

- Gas, **6: 462**

Specific heat

- Aqueous solution, **5: 115**

- Gas, **5: 80, 81; 7: 233**

- Liquid, **5: 86**

- Solid, **5: 86**

- Surface tension, aqueous solution, **4: 464**

- Thermal conductivity, aqueous solution, **5: 229**

- Thermal expansion, **3: 16**

- Toxicology, **2: 319**

- Transference number, **6: 309–311**

Vapor pressure

- Aqueous solution, **3: 301, 361**

- Liquid, **3: 213**

- Solid, **3: 207**

- Vapor pressure above 1 atm., **3: 228**

- Vapor pressure lowering in aqueous solution, **3: 293**

Verdet constant

- Aqueous solution, **6: 426**

- Liquid, **6: 426**

Viscosity

- Aqueous solution, **5: 12**

- Gas, **5: 3**

- X-rays, absorption coefficient, **6: 13**

-Acetic acid***-Aluminum chloride*****-Ammonium chloride*****-Ammonium dichloroacetate*****-Aniline*****-Aniline hydrochloride*-Ferric chloride****-Antimony chloride*****-Antimony trioxide*****-Barium chloride*****-Barium chloride*-Sodium chloride****-Barium hydroxide*****-Barium oxide*-Sodium oxide****-Benzene*****-Benzilic acid*****-Benzoic acid*****-Bismuth chloride*****-Bismuth oxychloride*****-Boric acid*****-Butyl alcohol*****-Cadmium chloride*****-Cadmium sulfate*****-Calcium acetate*-Potassium tartrate**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Hydrogen chloride.—(Continued)

- Calcium chloride*
- Calcium chloride*-Potassium dichromate
- Calcium hydroxide*
- Calcium oxalate*-Potassium chloride
- Calcium sulfate*
- Carbon dioxide*
- Catechol*
- Chlorine*
- Cinnamic acid*
- Citric acid*
- Cobaltous chloride*
- Cupric chloride*
- Cupric chloride*-Cuprous chloride
- Dichloroacetic acid*
- 3, 5-Dinitrobenzoic acid*
- Diphenic acid*
- Diphenylacetic acid*
- Diphenylamine*
- Diphenyleneglycolic acid*
- Ethane*
- Ethyl alcohol*
- Ethyl ether*
- Ferric chloride*
- d-Glucose*
- Hydrogen sulfide
- Freezing point-solubility, 4: 42
- Hydroquinol
- Freezing point-solubility in water, 4: 396
- Lead chloride
- Density, aqueous solution, 3: 95
- Freezing point-solubility in water, 4: 304; 7: 314
- Lead chromate
- Solubility in water, 7: 336
- Lead dioxide
- Equilibrium constant of reaction, 7: 248
- Lead sulfate
- Solubility in water, 7: 318
- Levulose
- Surface tension, 4: 470
- Lithium chloride
- Density, aqueous solution, 3: 96
- Freezing point-solubility in water, 4: 313
- Vapor pressure of aqueous solution, 3: 376
- Magnesium chloride
- Density, aqueous solution, 3: 95
- Magnesium oxalate
- Solubility in water, 7: 340
- Magnesium sulfate
- Density, aqueous solution, 3: 95
- Malonic acid
- Freezing point-solubility in water, 4: 396
- Mandelic acid
- Freezing point-solubility in water, 4: 397
- Manganese chloride
- Density, aqueous solution, 3: 95
- Mercuric chloride
- Density, aqueous solution, 3: 95
- Freezing point-solubility in water, 4: 305
- Viscosity, aqueous solution, 5: 18
- Methyl alcohol
- Density, 3: 135
- Freezing point-solubility, 4: 186, 212
- Viscosity, 5: 26
- Aqueous solution, 5: 24
- Methyl chloride
- Freezing point-solubility, 4: 186
- Methyl ether
- Boiling point, maximum, 3: 323
- Critical phenomena, 3: 354
- Freezing point-solubility, 4: 212
- Vapor pressure, 3: 285

Hydrogen chloride.—(Continued)

- Methylpicric acid
- Freezing point-solubility in water, 4: 396
- β -Naphthalenesulfonic acid
- Density, aqueous solution, 3: 101; 4: 397
- Freezing point-solubility in water, 4: 397
- Naphthol
- Freezing point-solubility in water, 4: 397
- Naphthylamine naphthalenedisulfonate
- Freezing point-solubility in water, 4: 289
- Naphthylamine naphthalenesulfonate
- Freezing point-solubility in water, 4: 289
- Nickel chloride
- Freezing point-solubility in water, 4: 309
- Nitric acid
- Density, aqueous solution, 3: 95
- Nitrobenzoic acid (o-, m-)
- Freezing point-solubility, 4: 396
- Nitrophenol (m-, p-)
- Freezing point-solubility in water, 4: 396
- Nitrous oxide
- Vapor pressure, 3: 285
- Oxalic acid
- Density, aqueous solution, 3: 101; 4: 395
- Freezing point-solubility in water, 4: 395
- Oxygen
- Equilibrium constant, 7: 233
- Phenanthraquinone
- Freezing point-solubility in water, 4: 397
- Phenol
- Freezing point-solubility in water, 4: 396
- Phenylacetic acid
- Freezing point-solubility in water, 4: 397
- Phosphine
- P-V-T relations, 3: 17
- Phthalic acid
- Density, aqueous solution, 3: 101
- Freezing point-solubility in water, 4: 397
- Picric acid
- Freezing point-solubility in water, 4: 396
- Potassium chloride
- Density, aqueous solution, 3: 96
- Freezing point-solubility in water, 4: 313, 314
- Viscosity, aqueous solution, 5: 18
- Potassium chloride-Sodium chloride
- Density, aqueous solution, 3: 100
- Freezing point-solubility in water, 4: 313
- Viscosity of aqueous solution, 5: 19
- Potassium dichloroacetate
- Density, aqueous solution, 3: 96
- Potassium hydrogen tartrate
- Freezing point-solubility in water, 4: 303
- Potassium sulfate
- Density, aqueous solution, 3: 96
- Praseodymium chloride
- Density, aqueous solution, 3: 95
- Propionic acid
- Freezing point-solubility, 4: 212
- Pyrogallol
- Freezing point-solubility in water, 4: 396

Hydrogen chloride.—(Continued)

- Quinhydrone
- Freezing point-solubility in water, 4: 397
- Quinone
- Freezing point-solubility in water, 4: 396
- Resorcinol
- Freezing point-solubility in water, 4: 396
- Salicylic acid
- Freezing point-solubility in water, 4: 397
- Scandium oxalate
- Freezing point-solubility, 4: 303
- Sodium chloride
- Density, aqueous solution, 3: 96
- Viscosity, aqueous solution, 5: 18
- Sodium dichloroacetate
- Density, aqueous solution, 3: 96
- Sodium oxide
- Freezing point-solubility in water, 4: 313, 314
- Sodium sulfate
- Density, aqueous solution, 3: 96
- Sodium sulfate-Sulfuric acid
- Density, aqueous solution, 3: 100
- Stannic chloride
- Density, aqueous solution, 3: 95
- Stannous chloride
- Density, aqueous solution, 3: 95
- Freezing point-solubility in water, 4: 303
- Strontium chloride
- Density, aqueous solution, 3: 95
- Freezing point-solubility in water, 4: 310, 311, 386
- Strontium iodide
- Freezing point-solubility in water, 4: 275
- Strontium sulfate
- Freezing point-solubility in water, 4: 287
- Styphnic acid
- Freezing point-solubility in water, 4: 396
- Suberic acid
- Freezing point-solubility in water, 4: 397
- Succinic acid
- Freezing point-solubility in water, 4: 396
- Sucrose
- Density, aqueous solution, 3: 101
- Surface tension, 4: 470
- Sulfur dioxide
- Freezing point-solubility, 4: 42
- Sulfuric acid
- Density, aqueous solution, 3: 95
- Tartaric acid
- Freezing point-solubility in water, 4: 396
- Tellurium dioxide
- Freezing point-solubility in water, 4: 290
- Thallium monochloride
- Solubility in water, 7: 319
- Thallous oxalate
- Freezing point-solubility in water, 4: 300
- Thorium oxalate
- Solubility in water, 7: 318, 319
- Thorium sulfate
- Freezing point-solubility in water, 4: 278
- Thymol
- Freezing point-solubility in water, 4: 397
- Toluene
- Boiling point elevation, 3: 328

* Data for system will be found under this compound in Index. Full explanation on page vii.

Hydrogen chloride.—(Continued)-*Trichlorolactic acid*Freezing point-solubility in water, **4**: 395-*Triphenylsulfanilic acid*Freezing point-solubility in water, **4**: 397-*Uranous sulfate*Density, aqueous solution, **3**: 95-*Urea*Viscosity, aqueous solution, **5**: 24-*Zinc chloride*Density, aqueous solution, **3**: 95-*Zinc sulfate*Density, aqueous solution, **3**: 95Reaction with, **7**: 254**Hydrogen cyanide**Absorption spectra, **5**: 331, 334Birefringence, electrical, **7**: 110Boiling point, **3**: 215, 232Critical point data, **3**: 232, 248Critical potentials, **6**: 72

Density

Aqueous solution, **3**: 61Liquid, **3**: 28Dielectric constant, **6**: 83Electrical conductivity, **6**: 143Aqueous solution, **6**: 261Free energy, **7**: 244, 245In water, **7**: 245Ionization, **7**: 245Solution, **7**: 245Vaporization, **7**: 245Heat of formation, **5**: 182Heat of ionization, **7**: 245Heat of vaporization, **5**: 136Ionization constant, **7**: 245Melting point under pressure, **4**: 10Orthobaric density, **3**: 231Refractivity, **7**: 10Solubility in water, **3**: 261Specific heat, gas, **5**: 80Surface tension, **4**: 448Toxicology, **2**: 319Vapor pressure, **3**: 214, 215Aqueous solution, **3**: 365Vapor pressure above 1 atm., **3**: 231Viscosity, **7**: 213-*Benzene**-*Iodine*Free energy of reaction, **7**: 245-*Potassium iodide*Freezing point-solubility, **4**: 48-*Potassium nitrate*Freezing point-solubility, **4**: 48-*Silver chloride*Solubility in water, **7**: 271-*Silver cyanide*Free energy of solution, **7**: 271Solubility in water, **7**: 271**Hydrogen disulfide**-*Sulfur*Freezing point-solubility, **4**: 31**Hydrogen fluoride**Band spectra, **5**: 414Density, aqueous solution, **3**: 54Electrical conductivity, aqueous solution, **6**: 260Entropy change of formation, **7**: 232

Free energy

Formation, **7**: 232Polymer, **7**: 232Polymerization, **7**: 232Freezing point lowering of aqueous solution, **4**: 254, 261Heat of formation, **5**: 176Heat of polymerization, **7**: 232Heat of vaporization, **5**: 136Molecular weight of liquid, **7**: 232Solubility in water, **3**: 258**Hydrogen fluoride.**—(Continued)

Specific heat

Aqueous solution, **5**: 122Gas, **7**: 232Transference numbers, **6**: 310Vapor pressure, **3**: 213; **7**: 232-*Antimony trifluoride**-*Columbium pentafluoride**-*Potassium fluoride*-*Lead fluoride-Potassium fluoride*Freezing point-solubility in water, **4**: 273-*Lead fluoride-Sodium fluoride*Freezing point-solubility in water, **4**: 273-*Mercuric oxide*Freezing point-solubility in water, **4**: 273; **7**: 259-*Potassium fluoride*Freezing point-solubility in water, **4**: 274-*Potassium fluoride-Tantalum pentafluoride*Freezing point-solubility in water, **4**: 274-*Silver fluoride*Freezing point-solubility in water, **4**: 274-*Sodium fluoride*Freezing point-solubility in water, **4**: 274**Hydrogen iodide**Aqueous solution. *See* Hydriodic acid.Band spectra, **5**: 414Boiling point, **1**: 106, 162; **3**: 228, 328Concentration cells, **6**: 323Critical point data, **3**: 228, 248Critical potentials, **6**: 72

Density

Aqueous solution, **3**: 55Gas, **3**: 3Liquid, **1**: 106; **3**: 22

Dielectric constant

Gas, **6**: 74Liquid, **6**: 76Solid, **6**: 76Dispersion formula, **7**: 11Electrical conductivity, **6**: 142Aqueous solution, **6**: 241, 242Free energy, **7**: 235Formation, **7**: 235Reaction with sulfur, **7**: 237Freezing point lowering in aqueous solution, **4**: 254Heat of dissociation, **5**: 418Heat of formation, **5**: 177Heat of fusion, **5**: 131Heat of transition, **5**: 177Heat of vaporization, **5**: 136Ionization by α -particles, **6**: 122Melting point, **1**: 106Orthobaric density, **3**: 228Photochemical decomposition, **7**: 164, 166, 168Photochemical oxidation, **7**: 168

Refractive index

Aqueous solution, **7**: 65Gas, **7**: 8Liquid, **1**: 106, 165Solubility in water, **3**: 258; **4**: 217Sound, velocity of, in, **6**: 462

Specific heat

Aqueous solution, **5**: 122Gas, **5**: 80; **7**: 235Liquid, **5**: 86Solid, **5**: 86Transference number, **6**: 309Transmission of radiant energy, **5**: 270

Vapor pressure

Liquid, **3**: 213Solid, **3**: 207**Hydrogen iodide.**—(Continued)Vapor pressure above 1 atm., **3**: 228

Verdet constant

Aqueous solution, **6**: 426Liquid, **6**: 426

Viscosity

Aqueous solution, **5**: 12Gas, **5**: 3-*Hydrogen sulfide*Freezing point solubility, **4**: 42Vapor pressure, **3**: 354-*Iodine*Vapor pressure of aqueous solution, **3**: 376-*Methyl ether*Freezing point-solubility, **4**: 187-*Toluene*Boiling point elevation, **3**: 328**Hydrogen ion concentration**, **1**: 81Interfacial tension, effect on, **4**: 438Water, **6**: 152**Hydrogen peroxide**Absorption spectra, solutions, **5**: 327Angle of contact, **4**: 434Boiling point, **1**: 106, 162Decomposition, kinetics of, **7**: 116, 120Decomposition by catalase, **7**: 157

Density

Aqueous solution, **3**: 54Liquid, **1**: 106; **3**: 22Solid, **1**: 106; **3**: 43Electrical conductivity, aqueous solution, **6**: 260Free energy (gas, liquid, solid), **7**: 232Fusion, **7**: 232In water, **7**: 232Ionization, **7**: 232Vaporization, **7**: 232Freezing point lowering of aqueous solution, **4**: 254, 261Heat of formation, **5**: 176Heat of fusion, **5**: 131; **7**: 232Heat of vaporization, **7**: 232Ionization constant, **7**: 232Photochemical decomposition, **7**: 161, 164Quantum sensitivity, **7**: 168Refractive index, **1**: 106, 165Silver reduction equivalent, **5**: 439Solubility in water, **4**: 251

Specific heat

Aqueous solution, **5**: 122Gas, **7**: 232Liquid, **5**: 106; **7**: 232Solid, **5**: 95; **7**: 232Surface tension, **4**: 447Aqueous solution, **4**: 464Vapor pressure, **3**: 213; **7**: 232-*Acetophenone**-*Ammonia**-*Amyl acetate**-*Amyl alcohol**-*Aniline**-*Benzene**-*Chloroform**-*Ethyl acetate**-*Ethyl ether**-*Ethyl isovalerate**-*Isoamyl propionate*Distribution coefficients in water, **3**: 419-*Isobutyl alcohol*Distribution coefficients in water, **3**: 419-*Isobutyl butyrate*Distribution coefficients in water, **3**: 419-*Methyl iodide*Distribution coefficients in water, **3**: 419

* Data for system will be found under this compound in Index. Full explanation on page vii.

Hydrogen peroxide.—(Continued)*-Nitrobenzene*Distribution coefficients in water, **3**: 419*-Phenol*Distribution coefficients in water, **3**: 419*-Potassium sulfate*Freezing point-solubility in water, **4**: 273*-Propyl butyrate*Distribution coefficients in water, **3**: 419*-Propyl formate*Distribution coefficient in water, **3**: 419*-Quinoline*Distribution coefficients in water, **3**: 419*-Sodium chloride*Freezing point-solubility, **4**: 42*-Sodium nitrate*Freezing point-solubility, **4**: 42*-Sodium sulfate*Freezing point-solubility, **4**: 42*-Sucrose*Freezing point-solubility, **4**: 186*-m-Toluidine*Distribution coefficients in water, **3**: 419**Hydrogen selenide**Boiling point, **3**: 229Critical point data, **3**: 229, 248Decomposition pressure of hydrate, **7**: 238Density, **3**: 22Gas, **3**: 3Dissociation constant, **7**: 238Electrical conductivity, aqueous solution, **6**: 260Free energy of solution, **7**: 238Heat of formation, **5**: 178Heat of solution, **7**: 238Ionization constant, **7**: 238Orthobaric density, **3**: 229Solubility in non-aqueous liquids, **3**: 264Solubility in water, **3**: 259; **7**: 238

Vapor pressure

Liquid, **3**: 213Solid, **3**: 207Vapor pressure above 1 atm., **3**: 229*-Iodine*Equilibrium constant of reaction, **7**: 238**Hydrogen sulfide**Absorption spectra, solutions, **5**: 327Boiling point, **1**: 107, 162; **3**: 229, 328Critical point data, **3**: 228, 248Critical potentials, **6**: 72Decomposition pressure of hydrate **7**: 237

Density

Gas, **3**: 3Liquid, **1**: 107; **3**: 22

Dielectric constant

Gas, **6**: 75, 79Liquid, **6**: 76, 77Diffusion in gelatin solutions, **5**: 64Dispersion formula, **7**: 11Electrical conductivity, **6**: 142Aqueous solution, **6**: 260Free energy, **7**: 237Formation, **7**: 237Ionization, **7**: 237In water, **7**: 237Reaction with ammonia, **7**: 241Reaction with iodine, **7**: 237Reaction with lead sulfide, **7**: 249Solution, **7**: 237Freezing point lowering of aqueous solution, **4**: 261**Hydrogen sulfide.**—(Continued)Heat of decomposition of hydrate, **7**: 237Heat of formation, **5**: 178Heat of ionization, **7**: 237Heat of vaporization, **5**: 136Ignition temperature, **2**: 173Inflammability, limits of, **2**: 176Ionization by γ -rays, **6**: 123Ionization constants, **7**: 237Ions, mobility of, in, **6**: 111Melting point, **1**: 107Orthobaric density, **3**: 229Photochemical synthesis, **7**: 164Polarization of light scattered by, **5**: 265Reaction with polysulfide ion, **7**: 237

Refractive index

Gas, **7**: 8Liquid, **1**: 107, 165Solubility in aqueous solutions, **3**: 274Solubility in non-aqueous liquids, **3**: 264Solubility in water, **3**: 259Sound, velocity of, in, **6**: 462Specific heat, gas, **5**: 80, 81; **7**: 237Thermal conductivity, **5**: 213Thermal expansion, **3**: 16Toxicology, **2**: 320

Vapor pressure

Aqueous solutions, **3**: 361Liquid, **3**: 213Solid, **3**: 207Vapor pressure above 1 atm., **3**: 228Viscosity, gas, **5**: 3*-Ammonia***-Antimony***-Arsenic***-Benzene***-Boron fluoride***-Calcium sulfide***-Carbon dioxide***-Chloroform***-Hydrogen***-Hydrogen bromide***-Hydrogen chloride***-Hydrogen iodide***-Methyl alcohol*Freezing point-solubility, **4**: 212*-Methyl ether*Freezing point-solubility, **4**: 212*-Silver iodide*Reaction in water, **7**: 272*-Toluene*Boiling point elevation, **3**: 328*-Triethylammonium chloride*Boiling point elevation, **3**: 328**Hydrogen telluride**Density, **3**: 22Gas, **3**: 3Electrical conductivity, aqueous solution, **6**: 260Heat of formation, **5**: 178Ionization constant, **7**: 238

Vapor pressure

Liquid, **3**: 213Solid, **3**: 207Hydrogen tube, filters for, **5**: 272Hydroglucal, optical rotatory power, **7**: 406**Hydroherderite**Density, **1**: 146Refractive index, **1**: 146, 171Hydrolysis, kinetics of, **7**: 128, 140, 153**Hydromagnesite**Density, **1**: 141Refractive index, **1**: 141, 170Hydrometer, definition, **1**: 37Hydrometer scales, **1**: 31**Hydromuconic acids**Heat of combustion, **5**: 165**Hydrone, 2**: 377**Hydronephelite**Density, **1**: 153Refractive index, **1**: 153, 166**Hydroperoxide ion**Free energy of formation, **7**: 231**Hydrophone, 6**: 457Berger, **6**: 454**Hydrophone oscillator**, Fessenden, **6**: 455**Hydrophyllite**Density, **1**: 143Melting point, **1**: 143Refractive index, **1**: 143, 165*See also* Calcium chloride.**Hydroquinine sulfate**Absorption spectra, **5**: 370, 372**Hydroquinone**, absorption spectra, **5**: 379**Hydroquinol**Absorption spectra, **5**: 339, 361, 375, 377Boiling point elevation in aqueous solution, **3**: 327Crystallography, **1**: 326Density, aqueous solution, **3**: 114Diffusion in ethyl alcohol, **5**: 74Diffusion in methyl alcohol, **5**: 73Diffusion in water, **5**: 70Electrical conductivity, aqueous solution, **6**: 273Flash point, **2**: 161Heat of combustion, **5**: 167Heat of dilution with water, **5**: 161Heat of fusion, **5**: 133Heat of solution in water, **5**: 149Photoluminescence **5**: 386Refractive index, **7**: 29

Specific heat

Aqueous solution, **5**: 125Liquid, **5**: 110Solid, **5**: 103Surface tension, aqueous solution, **4**: 469

Vapor pressure

Liquid, **3**: 221Solid, **3**: 209Viscosity, aqueous solution, **5**: 23*-Acetamide***-Acetic acid***-Acetone***-Acetophenone***-Acridine***-m-Aminophenol***-Ammonia***-Aniline***-Antipyrine***-Azobenzene***-p-Azoxyanisole***-Benzamide***-Benzhydrol***-Benzophenone***-Camphor***-Carbazole***-Catechol***-Catechol*- α -Nitronaphthalene**-Catechol*-Resorcinol**-Chloral hydrate***-Cineole***-Cinnamic acid***-Dimethyl oxalate***-Diphenylamine***-Diphenylmethane***-Ethyl alcohol***-Ethyl ether***-Fenchone***-Hydrogen chloride***-p-Hydroxybenzaldehyde*Freezing point-solubility, **4**: 139*-p-Methoxycinnamic acid*Freezing point-solubility, **4**: 140*-Naphthalene*Freezing point-solubility, **4**: 140*-Naphthylamine (α -, β -)*Freezing point-solubility, **4**: 140*- α -Nitronaphthalene*Freezing point-solubility, **4**: 140*-Phenol*Miscibility in water, **3**: 414

* Data for system will be found under this compound in Index. Full explanation on page vii.

Hydroquinol.—(Continued)-Phenylenediamine (*o*-, *m*-, *p*-)

Freezing point-solubility, 4: 139

-*p*-Quinone

Freezing point-solubility, 4: 127

-Resorcinol

Freezing point-solubility, 4: 138

-Succinic acid

Freezing point-solubility, 4: 114

-Succinimide

Freezing point-solubility, 4: 113

-*p*-Toluidine

Freezing point-solubility, 4: 139

-Trimethylcarbinol

Freezing point-solubility, 4: 116

-1, 3, 5-Trinitrobenzene

Freezing point-solubility, 4: 118

-Triphenylcarbinol

Freezing point-solubility, 4: 140

-Triphenylmethane

Freezing point-solubility, 4: 140

Hydrosorbic acid

Heat of combustion, 5: 165

Hydrosulfide ion

Free energy, 7: 237

Dissociation constant, 7: 237

Hydrotalcite

Density, 1: 142

Refractive index, 1: 142, 166

Hydroxide ion

Free energy of formation, 7: 231

Hydroxyacetanilide

Heat of fusion, 5: 134

Specific heat

Liquid, 5: 111

Solid, 5: 104

Hydroxyazobenzene

Magnetic susceptibility, 6: 363

o*-Hydroxybenzaldehyde.** See Salicylaldehyde.m*-Hydroxybenzaldehyde**

Absorption spectra, 5: 341

Electrical conductivity, aqueous solution, 6: 279

Solubility in water, 3: 391; 4: 252

-Benzene*

-Benzoic acid*

-Catechol*

-Dinitrobenzene (*o*-, *m*-, *p*-)*

-2, 4-Dinitrophenol*

-2, 4-Dinitrotoluene*

-Naphthol (α -, β -)

Freezing point-solubility, 4: 148, 179

-Nitrophenol (*o*-, *p*-)

Freezing point-solubility, 4: 129, 131

-Phenol

Freezing point-solubility, 4: 178

-Picric acid

Freezing point-solubility, 4: 119

-Pyrogallol

Freezing point-solubility, 4: 178

-Resorcinol

Freezing point-solubility, 4: 178

-Salicylic acid

Freezing point-solubility, 4: 179

-Trichloroacetic acid

Freezing point-solubility, 4: 102

-2, 4, 6-Trinitrotoluene

Freezing point-solubility, 4: 146

***p*-Hydroxybenzaldehyde**

Absorption spectra, 5: 341

Electrical conductivity, aqueous solution, 6: 279

Heat of solution in water, 5: 150

Solubility in water, 3: 391; 4: 252

-Benzene*

-Dimethylaniline*

-Hydroquinol*

-Phenol

Freezing point-solubility, 4: 135

***p*-Hydroxybenzaldehyde.**—(Continued)

-Trichloroacetic acid

Freezing point-solubility, 4: 102

Hydroxybenzamide (*o*-, *m*-, *p*-)

Heat of solution in water, 5: 150

***m*-Hydroxybenzamide hydrochloride**

Heat of solution in water, 5: 150

Hydroxybenzoic acids

Vapor pressure

Liquid, 3: 223

Solid, 3: 209

o*-Hydroxybenzoic acid.** See Salicylic acid.m*-Hydroxybenzoic acid**

Absorption spectra, 5: 341, 362

Boiling point elevation in aqueous solution, 3: 327

Electrical conductivity, aqueous solution, 6: 279

Heat of combustion, 5: 165

Heat of solution in water, 5: 150

Solubility in water, 4: 252

-Benzamide*

-Benzene*

-Cineole*

-Ethyl acetate*

-Ethyl alcohol*

-Methyl alcohol

Heat of solution, 5: 152

***p*-Hydroxybenzoic acid**

Absorption spectra, 5: 341, 362

Boiling point elevation in aqueous solution, 3: 327

Electrical conductivity, aqueous solution, 6: 279

Heat of combustion, 5: 165

Heat of solution in water, 5: 150

Photoluminescence, 5: 386

Solubility in water 4: 252

-Benzamide*

-Benzene*

-Cineole*

-Ethyl alcohol*

-Ethyl ether*

***o*-Hydroxybenzyl alcohol**

Diffusion in ethyl alcohol, 5: 74

Diffusion in water, 5: 71

Heat of solution in water, 5: 150

-Ethyl alcohol*

Hydroxybutyric acid

-Ethyl ether*

 α -Hydroxybutyric acid, electrical conductivity, aqueous solution, 6: 267 **β -Hydroxybutyric acid**

Electrical conductivity, aqueous solution, 6: 268

Heat of combustion, 5: 165

Optical rotatory power, 7: 366

 γ -Hydroxybutyric acid, electrical conductivity, aqueous solution, 6: 268**Hydroxychlorobenzoic acids (*o*-, *m*-, *p*-)**

Electrical conductivity, aqueous solution, 6: 278

***p*-Hydroxycinnamic acid**

Heat of combustion, 5: 165

1-Hydroxy-2-(*p*-nitrophenyl)-ethyl methyl ketone, crystallization velocity, 5: 61**Hydroxyhydroquinol,** boiling point elevation in aqueous solution, 3: 327**Hydroxyisobutyric acid**

Density, aqueous solution, 3: 114

Electrical conductivity, aqueous solution, 6: 268

Heat of combustion, 5: 165

Surface tension, aqueous solution, 4: 468

1-Hydroxyisocaproic acid

-Carbon tetrachloride*

Hydroxylamine

Absorption spectra, solution, 5: 328

Boiling point, 1: 108, 162

Hydroxylamine.—(Continued)

Density, 1: 108

Aqueous solution, 3: 57

Electrical conductivity, aqueous solution, 6: 260

Heat of formation, 5: 179

Melting point, 1: 108

Refractive index, 1: 108, 165

Silver reduction equivalent, 5: 439

Hydroxylamine hydrochloride

Absorption spectra, solutions, 5: 328

Density, aqueous solution, 3: 60

Heat of formation, 5: 179

Specific heat, aqueous solution, 5: 122

Vapor pressure lowering in aqueous solution, 3: 293

-Ethyl alcohol*

-Methyl alcohol

Boiling point elevation, 3: 333

Hydroxylamine nitrate

Heat of formation, 5: 179

Hydroxylamine sulfate

Heat of formation, 5: 179

Specific heat, aqueous solution, 5: 122

Hydroxylamine trichloroacetate

Specific heat, aqueous solution, 5: 124

***o*-Hydroxymethylbenzoic acid**

Heat of combustion, 5: 165

***o*-Hydroxy-*m*-methylbenzylidenanilide**

Transition temperature, 4: 8

Hydroxymethylenbenzyl cyanide

Dielectric absorption, 6: 94

Dielectric constant, 6: 94

3-Hydroxymethylenecamphor

Dielectric absorption, 6: 96

Dielectric constant, 6: 96

3-Hydroxy-4-methoxytoluene

Verdet constant, 6: 429

 α -Hydroxy- β -phenylpropionic acid

Electrical conductivity, aqueous solution, 6: 291

Optical rotatory power, 7: 367

 β -Hydroxy- β -phenylpropionic acid

Electrical conductivity, aqueous solution, 6: 291

Optical rotatory power, 7: 367

 β -Hydroxypropionic acid, freezing point lowering of aqueous solution, 4: 262**8-Hydroxyquinoline**

Absorption spectra, 5: 344

-Benzene*

Hydroxytoluic acids

Electrical conductivity, aqueous solution, 6: 286

Heat of combustion, 5: 165

Solubility in water, 3: 392; 4: 253

Vapor pressure

Liquid, 3: 224

Solid, 3: 209

Hydroxytoluic aldehydes

Electrical conductivity, aqueous solution, 6: 285

Solubility in water, 3: 392; 4: 252

Hydroxytriazole

Tautomerism, kinetics of, 7: 119

Hydroxyvaleric acid (α -, γ -), electrical conductivity, aqueous solution, 6: 270**Hydrozincite**

Density, 1: 119

Refractive index, 1: 119, 172

Hygrosopicity, 2: 237, 321**Hyoscinamine sulfate**

Absorption spectra, ultra-violet, 5: 367

Hyoscyamine

Electrical conductivity, aqueous solution, 6: 301

Optical rotatory power, 7: 432

Racemization, kinetics of, 7: 118

Hypersthene, compressibility, 3: 50**Hypobromous acid**

Absorption spectra, solutions, 5: 327

Hypobromous acid.—(Continued)

- Dissociation constant, **7**: 235
- Free energy
 - Aqueous solution, **7**: 235
 - Formation, **7**: 235
- Heat of formation, **5**: 177
- Hypochlorous acid**
 - Absorption spectra, solutions, **5**: 327
 - Free energy
 - Aqueous solution, **7**: 233
 - Formation, **7**: 234
 - Ion, **7**: 233
 - Ionization, **7**: 233
 - Freezing point lowering of aqueous solution, **4**: 254, 261
 - Heat of formation, **5**: 177
 - Ionization constant, **7**: 233
 - Photochemical formation, **7**: 164
- Hypoiodous acid**
 - Free energy, **7**: 236
 - Heat of formation, **5**: 177
 - Ionization constant, **7**: 236
- Hypophosphoric acid**
 - Electrical conductivity, **6**: 243
 - Aqueous solution, **6**: 260
 - Freezing point lowering of aqueous solution, **4**: 255, 261
 - Heat of formation, **5**: 180
- Hypophosphorous acid**
 - Electrical conductivity aqueous solution, **6**: 260
 - Freezing point lowering of aqueous solution, **4**: 255, 261
 - Heat of formation, **5**: 180
 - Heat of fusion, **5**: 131
- Hyposulfurous acid**
 - Electrical conductivity, aqueous solution, **6**: 242
 - Heat of formation, **5**: 178
- Hypsometry**, definition, **1**: 37
- Hysteresis**, **6**: 370
- Ia-Ia** (alloy), **2**: 377; *cf.* 464, 480
 - Electrical conductivity, **6**: 169
- Ice**
 - Compressibility, **3**: 50
 - Density, **2**: 315
 - Dielectric constant, **6**: 78
 - Electrical conductivity, **6**: 152
 - Emission, spectral, **5**: 258
 - Refractive index, **7**: 17
 - Specific heat, **5**: 95
 - Thermal conductivity, **2**: 315; **5**: 216, 217, 231
 - Thermal diffusivity, **2**: 316
 - Thermal expansion, **3**: 43
 - Vapor pressure, **3**: 210
 - See also* Water.
- Ice point**, definition, **1**: 37
- Iceland**, weights and measures, **1**: 8
- Iceland spar**
 - Electrical conductivity, **6**: 154
 - Refractive index, **7**: 24
 - Solution velocity in acids, **5**: 58, 59
 - Specific heat, **5**: 99
 - See also* Calcium carbonate.
- Iddingsite**
 - Density, **1**: 129
 - Refractive index, **1**: 129, 172
- Ideal alloy**, electrical conductivity, **6**: 169
- Iditol**, optical rotatory power, **7**: 388
- Idonic acid**, optical rotatory power, **7**: 397
- Ignition pin alloy**, **2**: 377
- Ignition temperature**, **2**: 150, 161, 172
- Illium** (alloy), **2**: 377
- Illmenite**
 - Compressibility, **3**: 50
 - Density, **1**: 129
 - Electrical conductivity, **6**: 148
 - Thermal conductivity, **5**: 232

Illuminants

- Commercial, luminous efficiency, **5**: 437
- Photographic efficiency, **5**: 445
- Selected sources, **5**: 247
- Illumination**
 - Definition, **1**: 38
 - Surface, conversion factors, **1**: 26
- Ilvaite**
 - Density, **1**: 145
 - Refractive index, **1**: 145, 173
 - Thermal conductivity, **5**: 232
- Iminocamphor**
 - Optical rotatory power, **7**: 449
- Immadium bronze**, **2**: 377
- Impact resistance**, definition, **2**: x
- Imperial** (alloy), **2**: 377, 480
- Imphy crucible steel**
 - Electrical conductivity, **6**: 200
- Impsonite**, **2**: 169
- Indaconine**, optical rotatory power, **7**: 477
- Indaconitine**, optical rotatory power, **7**: 478
- Indene**
 - Birefringence, magnetic, **7**: 111
 - Magnetic susceptibility, **6**: 363
 - Refractive index, **7**: 45
 - Verdet constant, **6**: 430
 - Acenaphthene*
 - Fluorene*
 - Naphthalene
 - Freezing point-solubility, **4**: 180
- Index of refraction.** *See* Refractive index.
- Indicators**
 - Absorption spectra, **7**: 188
 - Acid-base, **1**: 81, 84
 - Rearrangement, kinetics of, **7**: 127
- Indigo**, heat of combustion, **5**: 168
- Indigo dyes**, absorption spectra, **7**: 202
- Indigotin**
 - Aniline*
 - Phenol
 - Boiling point elevation, **3**: 345
 - Quinoline
 - Boiling point elevation, **3**: 346
 - p-Toluidine
 - Boiling point elevation, **3**: 346
- Indium**
 - Boiling point, **1**: 102
 - Compressibility, **3**: 47
 - Critical potentials, **6**: 71
 - Density, **1**: 104; **2**: 456
 - Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 104; **6**: 136, 137
 - Low temperature, **6**: 127, 133
 - Electrode potential, **6**: 320
 - Emission spectra, **5**: 300
 - Hall effect, **6**: 416
 - Hardness, **2**: 592
 - Isotopes, **1**: 45
 - Magnetic susceptibility, **6**: 355
 - Melting point, **1**: 104
 - Nernst effect, **6**: 420
 - Persistent lines, **5**: 323
 - Quantum numbers, **5**: 408
 - Specific heat, **1**: 104; **5**: 93
 - Spectral series, **5**: 399
 - Thermal expansion, **1**: 104; **2**: 460
 - Thermochemistry, **5**: 184
 - Thermoelectric properties, **6**: 214
 - X-ray absorption limits, **6**: 38
 - X-ray crystal structure, **1**: 340
 - X-ray emission spectra, **6**: 38
 - X-ray series, limiting frequencies, **6**: 35
 - Gallium*
 - Iodine
 - Freezing point-solubility, **4**: 24
 - Lead
 - Electrical conductivity, **6**: 192
 - Equilibrium diagram, **2**: 414
 - Extrusion pressure, **2**: 593

Indium.—(Continued)

- Mercury
 - Density, **2**: 589
 - Specific volume, **2**: 589
- Thallium
 - Equilibrium diagram, **2**: 436
- Indium bromide**
 - Ammines, heat of formation, **5**: 184
 - Density, aqueous solution, **3**: 63
 - Electrical conductivity, aqueous solution, **6**: 234, 239
 - Heat of formation, **5**: 184
 - Specific heat, aqueous solution, **5**: 122
- Indium dichloride**
 - Heat of formation, **5**: 184
- Indium iodide**
 - Ammines, heat of formation, **5**: 184
 - Heat of formation, **5**: 184
- Indium oxide**
 - Heat of formation, **5**: 184
 - Specific heat, **5**: 96
- Indium rubidium sulfate**
 - Density, **1**: 159
 - Refractive index, **1**: 159, 165
- Indium sesquioxide**
 - X-ray diffraction data, **1**: 342
- Indium sulfide**, magnetic susceptibility, **6**: 357
- Indium trichloride**
 - Ammines, heat of formation, **5**: 184
 - Electrical conductivity, aqueous solution, **6**: 231, 232
 - Heat of formation, **5**: 184
 - Magnetic susceptibility, **6**: 357
- Indobenzonine**, optical rotatory power, **7**: 478
- Indo-China**
 - French, weights and measures, **1**: 8
- Indole**
 - Absorption spectra, **5**: 342, 364, 366, 370, 373
 - Heat of combustion, **5**: 168
- Inductance**, definition, **1**: 38
- Induction, flux of**, conversion factors, **1**: 26
- Induction, magnetic**, **6**: 366
- Indurated fiber.** *See* Vulcanized fiber.
- Infusorial earth.** *See* Diatomaceous earth.
- Infusorial earth brick**, expansion on heating, **2**: 84
- Injector bronze**, **2**: 377, 569
- Ink**, albedo, **5**: 262
- Inner quantum number**, **6**: 25
- Inositol**
 - Crystallography, **1**: 326
 - Heat of combustion, **5**: 164
 - Heat of solution in water, **5**: 150
- Insect oil**, **2**: 203
- Composition**, **2**: 207
- Instrument bronze**, **2**: 377
- Insulate**
 - Dielectric strength, **2**: 310
 - Electrical conductivity, **2**: 310
- Insulating materials**
 - Acoustical, **6**: 458
 - Electrical, **2**: 299, 304
 - High temperatures, **2**: 316
 - Moisture content at various humidities, **2**: 323
 - Oils, **2**: 305
 - Plastics, **2**: 299, 309
 - Solids, **2**: 307
 - Thermal, **2**: 312
- Insulators, electrical**, **2**: 304
- Insulite**, **2**: 46
- Intensity, luminous**, definition, **1**: 38
- Intensity coefficient**, **1**: 18
- Interfacial tension**, **4**: 436
 - Gas at interface, effect of, **4**: 474
 - Pressure, effect of, **4**: 439
- Internal pressure**, **4**: 19
- International electrical units**, **1**: 18, 38

* Data for system will be found under this compound in Index. Full explanation on page vii.

International ellipsoid of reference, 1: 393

Surface, distances upon, **1:** 394

International temperature scale, 1: 52

Intramolecular transformations, kinetics of, 7: 118

Inulin

Diffusion in water, **5:** 72

Heat of combustion, **5:** 167

Heat of solution in water, **5:** 150

Hydrolysis, velocity of, **2:** 350

Invar, 2: 377, 471, 482

Electrical conductivity, **6:** 185

Kerr constant, **6:** 435

Specific heat, **5:** 118

Thermal conductivity, **5:** 225

Thermal expansion, **2:** 471

Inversion temperature, gases, 5: 146

Invert sugar

Decomposition by acid, velocity of, **2:** 350

Optical rotation, **2:** 350

Invertase, 7: 154

Inyoite

Density, **1:** 145

Refractive index, **1:** 145, 169

Iodate ion, free energy, 7: 235

Iodic acid

Absorption spectra, solutions, **5:** 327

Boiling point elevation in aqueous solution, **3:** 325

Decomposition pressure, **7:** 236

Density, aqueous solution, **3:** 55, 104

Free energy of aqueous solution, **7:** 236

Freezing point lowering of aqueous solution, **4:** 254

Heat of formation, **5:** 177

Optical rotatory power, **7:** 353

Reduction of, **7:** 149

Refractive index, aqueous solution, **7:** 65

Solubility in water, **4:** 217

Specific heat, aqueous solution, **5:** 122

X-ray absorption limits, **6:** 45

-*Ammonium iodate**

-*Molybdenum trioxide*

Density, aqueous solution, **3:** 96

Refractive index, aqueous solution, **7:** 91

-*Nitric acid*

Density, aqueous solution, **3:** 96

-*Potassium hydroxide*

Freezing point-solubility in water, **4:** 321

-*Sodium hydroxide*

Refractive index, aqueous solution, **7:** 91

-*Sodium iodate*

Freezing point-solubility in water, **4:** 321

-*Sulfuric acid*

Freezing point-solubility in water, **4:** 320

Iodides

-*Benzene*-Iodine*

Iodine

Absorption, index of, **5:** 249

Absorption spectra, solutions, **5:** 327 \

Adsorption by charcoal, **3:** 251

Band spectra, **5:** 415

Boiling point, **1:** 102; **3:** 325

Compressibility, **3:** 46

Concentration cells, **6:** 323

Condensation, irreversible, temperature of, **5:** 54

Critical constants, **1:** 102; **3:** 201, 248

Critical potentials, **6:** 71, 72

Cryoscopic constant, **4:** 214

Density

Liquid, **1:** 102; **3:** 20

Solid, **1:** 104; **3:** 21

Dielectric constant, **6:** 75

Iodine.—(Continued)

Diffusion in benzene, **5:** 74

Diffusion in ethyl alcohol, **5:** 73

Diffusion in methyl alcohol, **5:** 72

Diffusion in organic liquids, **5:** 75

Diffusion in potassium iodide solution, **5:** 63

Diffusion of vapor in air, **5:** 62

Dissociation, work of, **6:** 72

Dissymmetry in emission of electrons freed by X-rays, **6:** 5

Electrical conductivity

Liquid, **1:** 103

Solid, **1:** 104; **6:** 142, 153

Electrode potential, **7:** 235

Electrons, absorption of, by, **6:** 61

Electrons freed by X-rays, energy of, **6:** 4

Emission spectra, **5:** 299

Entropy, **5:** 88

Evaporation, velocity of, **5:** 54

Free energy, **7:** 235

Dissociation, **7:** 235

Electrode reaction, **7:** 235

Fusion, **7:** 235

In water, **7:** 235

Reaction with hydrogen, **7:** 235

Reaction with hydrogen sulfide, **7:** 237

Reaction with water, **7:** 235, 236

Sublimation, **7:** 235

Freezing point lowering of aqueous solution, **4:** 254, 261

Heat content, **5:** 88

Heat of dissociation, **5:** 418

Heat of fusion, **1:** 104

Heat of vaporization, **1:** 102; **5:** 135

Internal pressure, **4:** 19

Ionization, atomic, **6:** 122

Isotopes, **1:** 45

Magnetic susceptibility, **6:** 355

Melting point, **1:** 104

Overvoltage, **6:** 340

Persistent lines, **5:** 323

Photoconductivity, **6:** 66

Pressure-volume relations for gas, **3:** 435

Quantum numbers, **5:** 408

Refractive index

Aqueous solution, **7:** 65

Gas, **7:** 7

Solid, **5:** 249; **7:** 11

Solubility in solutions, **4:** 266

Solubility in water, **4:** 31

Sound, velocity of, in, **6:** 462, 463

Specific heat

Gas, **5:** 80, 81; **7:** 235

Liquid, **1:** 103; **5:** 93

Solid, **1:** 104; **5:** 85, 88

Thermal conductivity, **5:** 216

Thermal expansion, **1:** 102, 104

Thermochemistry, **5:** 177

Thermodynamic potential, **5:** 88

Toxicology, **2:** 320

Transition temperature, **4:** 6

Vapor pressure, **3:** 201

Viscosity

Gas, **1:** 102; **5:** 2

Liquid, **7:** 212

X-ray absorption limits, **6:** 38, 45

X-ray emission spectra, **6:** 38

X-ray series, limiting frequencies, **6:** 35

X-rays, absorption coefficient, **6:** 13, 16

X-rays, emission efficiency, **6:** 11

Zeeman effect, **5:** 420

-*Acetic acid**

-*Acetone**

-*Acetylene dichloride**

-*Aluminum iodide**

Iodine.—(Continued)

-*Ammonium iodide**

-*Ammonium iodide*-Nitrobenzene*

-*Amyl alcohol**

-*Aniline hydroiodide**

-*Antimony**

-*Antimony pentachloride**

-*Antimony pentiodide**

-*Antimony triiodide**

-*Arsenic**

-*Arsenous iodide**

-*Azobenzene**

-*Barium iodide*-Nitrobenzene*

-*Barium iodide*-Water*

-*Benzene**

-*Benzene*-Carbon tetrachloride*

-*Benzene*-Chloroform*

-*Benzene*-Ethyl ether*

-*Benzene*-Iodides*

-*Benzene*-Methylene iodide*

-*Benzoic acid**

-*Benzoic anhydride**

-*Bismuth**

-*Bismuth iodide**

-*Bromine**

-*Bromoform**

-*Calcium iodide**

-*Carbon disulfide**

-*Carbon disulfide*-Carbon tetrachloride*

-*Carbon disulfide*-Chloroform*

-*Carbon disulfide*-Ethyl alcohol*

-*Carbon disulfide*-Ethyl ether*

-*Carbon disulfide*-Sulfur*

-*Carbon tetrachloride**

-*Cesium chloride*-Nitrobenzene*

-*Cesium iodide**

-*Cesium iodide*-o-Nitrotoluene*

-*Cesium iodide*-Water*

-*Chlorine**

-*Chlorobenzene**

-*Chloroform**

-*Chloroform*-Ethyl alcohol*

-*Chloroform*-Ethyl ether*

-*Chloroform*-Propyl alcohol*

-*Cupric nitrate*-Lead iodide-Lead nitrate*

-*Cuprous iodide*-Water*

-*Decahydronaphthalene**

-*p-Dibromobenzene**

-*Dimethylphenylammonium iodide*-Nitrobenzene*

-*p-Dinitrobenzene**

-*Diphenyl**

-*Ethyl acetate**

-*Ethyl acetate*-Potassium iodide*

-*Ethyl alcohol**

-*Ethyl alcohol*-Ethyl ether*

-*Ethyl alcohol*-Potassium iodide*

-*Ethyl bromide*-Potassium iodide*

-*Ethyl chloride**

-*Ethyl ether**

-*Ethyl ether*-Methyl iodide*

-*Ethyl iodide**

-*Ethylene bromide**

-*Ethylene chloride**

-*Ferric iodide**

-*Glycerol**

-*Heptane**

-*Hexane**

-*Hydrogen cyanide**

-*Hydrogen iodide**

-*Hydrogen selenide**

-*Indium**

-*Iodoform*

Freezing point lowering, **4:** 37

-*Iodoform-Methylene iodide*

Density, **3:** 132

-*Iodoform-Methylene iodide-Xylene*

Density, **3:** 132

-*β-Iodopropionic acid*

Freezing point lowering, **4:** 37

Iodine.—(Continued)

- Isobutyl alcohol-Potassium iodide*
Freezing point-solubility, **4**: 268
- Lead iodide*
Freezing point-solubility in water, **4**: 266
- Lead iodide-Lead nitrate*
Density, aqueous solution, **3**: 100
- Lead nitrate*
Density, aqueous solution, **3**: 96
- Lithium iodide-Nitrobenzene*
Freezing point-solubility, **4**: 269
- Mercuric chloride*
Freezing point-solubility in water, **4**: 266
- Mercuric iodide*
Electrical conductivity, **6**: 150
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 31
- Methyl acetate*
Density, **3**: 132
- Methyl alcohol*
Boiling point elevation, **3**: 333
Density, **3**: 132
Surface tension, **4**: 470
- Methyl alcohol-Potassium iodide*
Density, **3**: 132
Surface tension, **4**: 474
Viscosity, **5**: 30
- Methyl iodide*
Freezing point-solubility, **4**: 33
- Methylal*
Boiling point elevation, **3**: 340
- Methylene iodide*
Density, **3**: 132
Freezing point lowering, **4**: 38
- Methylene iodide-Xylene*
Density, **3**: 132
- Naphthalene*
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 34
- o-Nitroanisole-Potassium iodide*
Freezing point-solubility, **4**: 268
- Nitrobenzene*
Density, **3**: 132
Distribution coefficients in water, **3**: 420
Freezing point lowering, **4**: 270
- Nitrobenzene-Phenylammonium iodide*
Freezing point-solubility, **4**: 270
- Nitrobenzene-Potassium bromide*
Freezing point-solubility, **4**: 268, 269
- Nitrobenzene-Potassium chloride*
Freezing point-solubility, **4**: 269
- Nitrobenzene-Potassium iodide*
Freezing point-solubility, **4**: 268, 269
- Nitrobenzene-Rubidium chloride*
Freezing point-solubility, **4**: 269
- Nitrobenzene-Rubidium iodide*
Freezing point-solubility, **4**: 268–270
- Nitrobenzene-Sodium iodide*
Freezing point-solubility, **4**: 268, 269
- Nitrobenzene-Strontium iodide*
Freezing point-solubility, **4**: 269, 270
- Nitrobenzene-Tetramethylammonium iodide*
Freezing point-solubility, **4**: 269, 270
- Nitromethane-Potassium iodide*
Freezing point-solubility, **4**: 268, 269
- Nitropentane-Potassium iodide*
Freezing point-solubility, **4**: 268
- o-Nitrotoluene-Potassium iodide*
Freezing point-solubility, **4**: 268, 269
- m-Nitrotoluene-Potassium iodide*
Freezing point-solubility, **4**: 268, 269
- m-Nitrotoluene-Sodium iodide*
Freezing point-solubility, **4**: 269
- Pentachloroethane*
Distribution coefficients in water, **3**: 420
Freezing point-solubility, **4**: 33

Iodine.—(Continued)

- Phenanthraquinone*
Freezing point lowering, **4**: 37
- Phenylacetoneitrile*
Density, **3**: 132
- Phosgene*
Boiling point elevation, **3**: 330
- Phosphorus*
Boiling point elevation, **3**: 325
Freezing point lowering, **4**: 37
- Potassium azide*
Freezing point-solubility, **4**: 267
- Potassium bromide*
Freezing point-solubility in water, **4**: 267, 269
- Potassium iodide*
Boiling point elevation, **3**: 325
Density, aqueous solution, **3**: 96
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 31
Freezing point-solubility in water, **4**: 267
- Potassium iodide-Trichloronitromethane*
Freezing point-solubility, **4**: 268
- Pyridine*
Density, **3**: 132
- Rubidium iodide*
Boiling point elevation, **3**: 325
Freezing point lowering, **4**: 37
Freezing point-solubility in water, **4**: 267
- Selenium*
Boiling point elevation, **3**: 325
Density, **3**: 132
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 24
Vapor pressure, **3**: 354
- Silver*
Electrode potential, **7**: 268
- Silver iodate*
Free energy of reaction, **7**: 269
- Silver nitrite*
Reaction in carbon tetrachloride, **7**: 269
- Sodium bromide*
Freezing point-solubility in water, **4**: 267
- Sodium formate*
Photochemical reaction, **7**: 165
- Sodium iodide*
Freezing point-solubility in water, **4**: 267
- Stannic iodide*
Boiling point elevation, **3**: 325
Freezing point lowering, **4**: 37
- Sulfur*
Boiling point elevation, **3**: 325
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 23
Vapor pressure, **3**: 354
- Tellurium*
Boiling point elevation, **3**: 325
Density, **3**: 132
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 24
Vapor pressure, **3**: 354
- Tetrachloroethane*
Distribution coefficients in water, **3**: 420
Freezing point-solubility, **4**: 33
- Tetrachloroethylene*
Distribution coefficients in water, **3**: 420
Freezing point-solubility, **4**: 33
- Tetralin*
Distribution coefficients in water, **3**: 420
- Tetramethylammonium iodide*
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 33
- Thionyl chloride*
Boiling point elevation, **3**: 328

Iodine.—(Continued)

- Tin*
Freezing point-solubility, **4**: 24
- Toluene*
Density, **3**: 132
- Trichloroethylene*
Distribution coefficients in water, **3**: 420
- Trimethylphenylammonium iodide*
Freezing point lowering, **4**: 37
Freezing point-solubility, **4**: 34
- Trimethyltoluylammonium iodide*
Freezing point lowering, **4**: 37
- Iodine bromide**
Heat of formation, **5**: 177
Sound, velocity of, in vapor, **6**: 462
- Iodine monochloride**
Band spectra, **5**: 414
Density, **3**: 22
Heat of dissociation, **5**: 418
Heat of formation, **5**: 177
Heat of fusion, **5**: 131
Sound, velocity of, in vapor, **6**: 462
Specific heat
Gas, **5**: 80, 81
Liquid, **5**: 106
- Carbon tetrachloride**
- Iodine pentoxide**
Heat of formation, **5**: 177
- Iodine trichloride**
Heat of formation, **5**: 177
- Bromine**
- Phosgene*
Boiling point elevation, **3**: 330
- Iodine value, definition, 2: xii**
- Iodoacenaphthene**
Absorption spectra, **5**: 348
- Acenaphthene**
- Bromoacenaphthene**
- Chloroacenaphthene**
- Iodoacetic acid**
Electrical conductivity, aqueous solution, **6**: 262
Esterification constant, **7**: 138
- p-Iodoaniline**
Absorption spectra, **5**: 339
- Isoamyl acetate*
Density, **3**: 182
Viscosity, **5**: 47
- Iodoanilinesulfonic acids, electrical conductivity, aqueous solution, 6: 273**
- Iodobenzene**
Absorption spectra, **5**: 332, 338
Azeotropic mixtures, **3**: 322
Birefringence, **7**: 111
Boiling point, **3**: 221
Critical constants, **3**: 246, 248
Density, **3**: 29, 33
Dielectric constant, **6**: 89
Diffusion in benzene, **5**: 74
Diffusion in ethyl alcohol, **5**: 74
Diffusion in methyl alcohol, **5**: 72
Heat of combustion, **5**: 169
Internal pressure, **4**: 19
Magnetic susceptibility, **6**: 362
Orthobaric density, **3**: 246
Refractive index, **7**: 38
Specific heat, **5**: 103
Surface tension, **4**: 436, 454
Vapor pressure, **3**: 221
Vapor pressure above 1 atm., **3**: 246
Verdet constant, **6**: 429
Viscosity, **7**: 217
- Aniline**
- Antimony tribromide**
- Antimony trichloride**
- Benzene**
- Bromobenzene**
- Chlorobenzene**
- Diethyl tartrate**
- Fluorobenzene**

* Data for system will be found under this compound in Index. Full explanation on page vii.

***o*-Iodobenzoic acid**

- Absorption spectra, **5**: 340
- Crystallography, **1**: 327
- Electrical conductivity, aqueous solution, **6**: 278
- Chloroform*
- Ethyl ether*
- Xylene

Distribution coefficients in water, **3**: 429

***m*-Iodobenzoic acid**

- Absorption spectra, **5**: 340
- Electrical conductivity, aqueous solution, **6**: 278

Iodoform

- Absorption spectra, **5**: 331, 334
- Density, **3**: 45
- Diffusion in benzene, **5**: 74
- Diffusion in methyl alcohol, **5**: 72
- Heat of combustion, **5**: 168
- Benzene*-Bromoform
- Benzene*-Methylene iodide
- Bromoform*
- Bromoform*-Xylene
- Iodine*
- Iodine*-Methylene iodide
- Iodine*-Methylene iodide-Xylene
- Methylene iodide-Xylene
- Density, **3**: 197

 α -Iodonaphthalene

- Quinoline
- Density, **7**: 87
- Refractive index, **7**: 87

 β -Iodonaphthalene

- Cryoscopic constant, **4**: 184
- Quinoline
- Density, **7**: 87
- Refractive index, **7**: 87
- Dispersion, **7**: 106

***o*-Iodonitrobenzene**

- Surface tension, **4**: 453
- p*-Iodonitrobenzene
- Freezing point-solubility, **4**: 175

***m*-Iodonitrobenzene**

- Crystallization velocity, **5**: 61
- Surface tension, **4**: 453
- m*-Bromonitrobenzene*
- m*-Chloronitrobenzene*

***p*-Iodonitrobenzene**

- o*-Iodonitrobenzene*

***o*-Iodophenol**

- p*-Iodophenol
- Freezing point-solubility, **4**: 176

***p*-Iodophenol**

- Absorption spectra, **5**: 338
- o*-Iodophenol*

1-Iodo-2-phenylacetylene

- Magnetic susceptibility, **6**: 362

Iodopropionic acid

- Diffusion in methyl alcohol, **5**: 72
- Electrical conductivity, aqueous solution, **6**: 264
- Chloroform*
- Dimethylpyrone*
- Ethyl ether*
- Iodine*
- Sodium β -iodopropionate
- Freezing point-solubility in water, **4**: 411
- Xylene
- Distribution coefficient in water, **3**: 425

3-Iodopropylene

- Azeotropic mixtures, **3**: 320, 323
- Diffusion in methyl alcohol, **5**: 72
- Surface tension, **4**: 449
- Verdet constant, **6**: 428
- Viscosity, **7**: 214

Iodosuccinimide, refractive index, **7**: 29

***p*-Iodotoluene**

- Cryoscopic constant, **4**: 183
- Dielectric constant, **6**: 92
- Heat of fusion, **5**: 133
- Melting point under pressure, **4**: 10
- Surface tension, **4**: 456

Iodoxylenes, refractive index, **7**: 43

Iodyrite

- Density, **1**: 124
- Refractive index, **1**: 124, 167
- See also Silver iodide.

Ionic conductivity, **6**: 230

Atmospheric, **6**: 442

Ionic mobility

- Conversion factors, **1**: 29
- Radioactive elements, **1**: 364

Ionization

- Gaseous, **6**: 119
- Heat of, **5**: 170; **6**: 53, 57, 69
- Radioactive rays, **1**: 363, 365, 367

Ionization constants

Weak electrolytes, **6**: 259

Ionization potentials

See Critical potentials.

Ions

Conductivity of, aqueous solution, **6**: 230

Gaseous

- Diffusivity, **6**: 115
- Mobility, **6**: 111
- Types of, **6**: 110
- Heat of formation, **5**: 169
- Hydration values, **6**: 311
- Mobility, **6**: 111
- Pressure, effect of, **6**: 114
- Temperature, effect of, **6**: 114

Normal, **6**: 110

Slow, **6**: 110

Transference numbers, **6**: 311

Vapors, condensation of, on, **6**: 117

Ipuranol, optical rotatory power, **7**: 463

Iridium

- Absorption, index of, **5**: 249, 252
- Boiling point, **1**: 102
- Compressibility, **3**: 47, 48
- Density, **1**: 104; **2**: 456
- Elastic properties, **2**: 588
- Electrical conductivity, **1**: 104; **6**: 136, 137
- Low temperature, **6**: 127, 133
- Emission, spectral, **5**: 242, 253
- Emission spectra, **5**: 300
- Evaporation, rate of, **5**: 54
- Hall effect, **6**: 416
- Hardness, **2**: 588
- Magnetic susceptibility, **6**: 355
- Melting point, **1**: 104
- Nernst effect, **6**: 420
- Persistent lines, **5**: 323
- Photoelectric threshold, **6**: 68
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 249, 252
- Righi-Leduc effect, **6**: 421
- Specific heat, **1**: 104; **5**: 93
- Spectral series, **5**: 399
- Thermal conductivity, **5**: 220, 221
- Thermal expansion, **1**: 104; **2**: 460
- Thermochemistry, **5**: 189
- Thermoelectric properties, **6**: 214
- X-ray absorption limits, **6**: 41
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 41
- Zeeman effect, **5**: 420

-Osmium

X-ray diffraction data, **1**: 349

-Platinum

- Annealing temperature, **2**: 591
- Density, **2**: 589
- Electrical conductivity, **6**: 195
- Magnetic field, effect of, **6**: 422
- Evaporation, velocity of, **5**: 54

-Platinum.—(Continued)

- Hardness, **2**: 588
- Specific heat, **5**: 121
- Specific volume, **2**: 589
- Thermal conductivity, **5**: 225
- Thermal expansion, **2**: 467
- Thermoelectric properties, **6**: 220

Iridium black

Hydrogen adsorption of, by, **3**: 253

Iridium dichloride

- Decomposition pressure, **7**: 274
- Heat of formation, **5**: 189

Iridium monochloride

Decomposition pressure, **7**: 274

-Ethyl ether*

Iridium oxide, heat of formation, **5**: 189

Iridium potassium chloride

Density, aqueous solution, **3**: 91

Iridium potassium trioxalate

Optical rotatory power, **7**: 353

Iridium trichloride

- Decomposition pressure, **7**: 274
- Heat of formation, **5**: 189

Iridosmine (alloy), **2: 377****Irish Free State**

Weights and measures, **1**: 7

Iron

- Absorption, index of, **5**: 249, 252
- Ammonia, reaction with, **7**: 279
- Brightness temperature, **1**: 60; **5**: 245
- Boiling point, **1**: 102; **3**: 205
- Carbon dioxide, reaction with, **7**: 277
- Carbon monoxide, reaction with, **7**: 279
- Cast
 - Acoustic resistivity, **6**: 459
 - Analyses, table of, **2**: 485
 - Compressibility, **3**: 50
 - Density, **2**: 517
 - Elastic properties, **2**: 516
 - Electrical conductivity, **6**: 188
 - Emission, spectral, **5**: 244
 - Endurance limits, **2**: 600, 608
 - Hardness, **2**: 527
 - Heat of fusion, **2**: 459
 - Magnetic properties, **6**: 374, 376, 385, 400
 - Manganese content, effect of, **2**: 525, 526
 - Manganese content and shrinkage, **2**: 476
 - Mechanical properties, **2**: 497
 - Oxidized, emission, spectral, **5**: 244
 - Silicon content, effect of, **2**: 525, 527
 - Sound, velocity of, in, **6**: 459
 - Specific heat, **2**: 518; **5**: 118
 - Surface tension, **4**: 440
 - Thermal conductivity, **2**: 518
 - Thermal expansion, **2**: 470, 472
 - Volume change on solidification, **2**: 476
- Cathodoluminescence, **5**: 388, 390
- Coated sheets, emission, spectral, **5**: 244
- Compressibility, **3**: 47, 48
- Contact potential, **6**: 57
- Corbino effect, **6**: 419
- Critical potentials, **6**: 71
- Curie point, **6**: 408
- Demagnetization by impact, **6**: 441
- Demagnetization by torsion, **6**: 441
- Density
 - Liquid, **1**: 102; **2**: 463
 - Solid, **1**: 104; **2**: 456
- Electrical conductivity, **1**: 104; **6**: 136–138, 140
- Low temperature, **6**: 127, 132
- Magnetic field, effect of, **6**: 423, 424
- Electrode potential, **6**: 319, 332; **7**: 276

Iron.—(Continued)

Electrolytic
Electrical conductivity, **6**: 174
Mechanical properties, **2**: 478
Thermal expansion, **2**: 472
Electronic structure, normal and excited, **6**: 71
Electrons, transmitted, velocity of, **6**: 62
Electrons excited by X-rays, number of, **6**: 5
Emission, spectral, **5**: 242, 253
Emission spectra, **5**: 293
Endurance limits, **2**: 600, 602, 605, 606
Entropy, **5**: 88
Ettingshausen effect, **6**: 419
Free energy of electrode reaction, **7**: 276
Gamma rays, absorption coefficient, **6**: 14, 21
Hall effect, **6**: 416, 418
Heat content, **5**: 88
Heat of fusion, **1**: 104; **2**: 458
Heat of transformation, **2**: 458
Heat of transition, **5**: 190
Heat of vaporization, **1**: 102
Hydrogen, permeability to, **5**: 76
Hydrogen, solubility of, in, **3**: 270
Ingot, thermal expansion, **2**: 470
Isotopes, **1**: 45
Joule effect, **6**: 440
Kerr constant, **6**: 435
Magnetic moment, **6**: 346
Magnetic properties, **6**: 374, 376, 378
Crystals, **6**: 410
Magnetization by rotation, **6**: 347
Magnetron number, **6**: 346
Melting point, **1**: 104
Nagaoka-Honda effect, **6**: 441
Nernst effect, **6**: 420
Nitrogen, reaction with, **7**: 279
Nitrogen, solubility of, in, **3**: 270
Oxygen, solubility of, in, **3**: 270
Peltier coefficient, **6**: 228
Persistent lines, **5**: 323
Photoelectric threshold, **6**: 68
Pig, heat of fusion, **2**: 459
Quantum numbers, **5**: 408
Radiation temperature, total, **5**: 246
Refraction, index of, **5**: 249, 252
Righi-Leduc effect, **6**: 421
Rotation by magnetization, **6**: 347
Solution velocity in acids, **5**: 59
Solution velocity in dissolved iodine, **5**: 57
Solution velocity in salt solutions, **5**: 57, 58
Sound, velocity of, in, **6**: 465
Specific heat
Liquid, **5**: 94
Solid, **1**: 104; **5**: 85, 88, 93
Spectral series, **5**: 398
Swedish, electrical conductivity, **6**: 174
Thermal conductivity, **5**: 220, 221
Magnetic field, effect of, **6**: 424
Thermal expansion, **1**: 104; **2**: 460
Thermochemistry, **5**: 190
Thermodynamic potential, **5**: 88
Thermoelectric properties, **6**: 214, 225, 226
Thomson coefficient, **6**: 228
Vapor pressure, **3**: 205
Viscosity, tangential coefficient, **5**: 7
Wiedemann effect, **6**: 441
Water vapor, reaction with, **7**: 277
X-ray absorption limits, **6**: 37, 44
X-ray crystal structure, **1**: 340
X-ray diffraction data, **2**: 356
X-ray emission spectra, **6**: 37
X-ray lines, relative intensity, **6**: 32
X-ray series, limiting frequencies, **6**: 35
X-ray wave lengths, standard, **6**: 34

Iron.—(Continued)

X-rays
Absorption, discontinuity in, **6**: 12
Absorption coefficient, **6**: 13-15
Emission efficiency, **6**: 11
Scattering, modification by, **6**: 17
Scattering coefficient, **6**: 17
Young's modulus, magnetic field, effect of, **6**: 440
Zeeman effect, **5**: 420
-Aluminum*
-Aluminum*-Carbon
-Aluminum*-Carbon-Chromium
-Aluminum*-Carbon-Copper-Manganese
-Aluminum*-Carbon-Manganese-Nickel
-Aluminum*-Carbon-Silicon
-Aluminum*-Chromium-Copper
-Aluminum*-Chromium-Copper-Silicon
-Aluminum*-Copper
-Aluminum*-Copper-Magnesium
-Aluminum*-Copper-Manganese
-Aluminum*-Copper-Manganese-Silicon
-Aluminum*-Copper-Manganese-Silicon-Zinc
-Aluminum*-Copper-Manganese-Tin-Zinc
-Aluminum*-Copper-Nickel-Silicon
-Aluminum*-Copper-Nickel-Silicon-Zinc
-Aluminum*-Copper-Silicon
-Aluminum*-Copper-Silicon-Zinc
-Aluminum*-Copper-Zinc
-Aluminum*-Silicon
-Aluminum*-Tin
-Antimony*
-Antimony*-Cobalt
-Arsenic*
-Arsenic*-Copper
-Arsenic*-Copper-Manganese-Phosphorus
-Arsenic*-Copper-Silicon
-Beryllium*
-Bismuth*
-Boron*
-Boron*-Carbon
-Carbon*
-Carbon*-Cerium
-Carbon*-Cerium-Chromium
-Carbon*-Cerium-Chromium-Nickel
-Carbon*-Cerium-Nickel
-Carbon*-Chromium
-Carbon*-Chromium-Copper
-Carbon*-Chromium-Copper-Nickel
-Carbon*-Chromium-Copper-Tungsten
-Carbon*-Chromium-Manganese
-Carbon*-Chromium-Manganese-Molybdenum-Nickel
-Carbon*-Chromium-Manganese-Molybdenum-Silicon
-Carbon*-Chromium-Manganese-Silicon
-Carbon*-Chromium-Manganese-Silicon-Tungsten
-Carbon*-Chromium-Molybdenum
-Carbon*-Chromium-Molybdenum-Nickel
-Carbon*-Chromium-Molybdenum-Tungsten-Vanadium
-Carbon*-Chromium-Molybdenum-Vanadium
-Carbon*-Chromium-Nickel
-Carbon*-Chromium-Nickel-Silicon
-Carbon*-Chromium-Nickel-Vanadium
-Carbon*-Chromium-Silicon
-Carbon*-Chromium-Tungsten
-Carbon*-Chromium-Uranium
-Carbon*-Chromium-Vanadium
-Carbon*-Cobalt-Manganese-Silicon
-Carbon*-Copper-Manganese
-Carbon*-Copper-Manganese-Nickel
-Carbon*-Copper-Manganese-Silicon
-Carbon*-Copper-Nickel
-Carbon*-Manganese
-Carbon*-Manganese-Molybdenum

Iron.—(Continued)

-Carbon*-Manganese-Molybdenum-Nickel
-Carbon*-Manganese-Nickel
-Carbon*-Manganese-Nickel-Silicon
-Carbon*-Manganese-Silicon
-Carbon*-Manganese-Silicon-Tungsten
-Carbon*-Manganese-Tungsten
-Carbon*-Molybdenum
-Carbon*-Molybdenum-Nickel
-Carbon*-Molybdenum-Silicon
-Carbon*-Molybdenum-Vanadium
-Carbon*-Nickel
-Carbon*-Nickel-Silicon
-Carbon*-Nickel-Uranium
-Carbon*-Nickel-Vanadium
-Carbon*-Nickel-Zirconium
-Carbon*-Phosphorus
-Carbon*-Phosphorus-Sulfur
-Carbon*-Silicon
-Carbon*-Sulfur
-Carbon*-Tantalum
-Carbon*-Titanium
-Carbon*-Tungsten
-Carbon*-Tungsten-Vanadium
-Carbon*-Uranium
-Carbon*-Vanadium
-Cerium*
-Chromium*
-Chromium*-Manganese-Nickel
-Chromium*-Manganese-Silicon
-Chromium*-Molybdenum
-Chromium*-Molybdenum-Tungsten
-Chromium*-Nickel
-Chromium*-Nickel-Silicon
-Chromium*-Nickel-Silicon-Vanadium
-Chromium*-Silicon
-Chromium*-Silicon-Titanium
-Chromium*-Tungsten
-Chromium*-Vanadium
-Cobalt*
-Cobalt*-Copper-Nickel-Zinc
-Cobalt*-Nickel
-Copper*
-Copper*-Lead-Tin-Zinc
-Copper*-Manganese
-Copper*-Manganese-Nickel
-Copper*-Manganese-Nickel-Zinc
-Copper*-Manganese-Silicon
-Copper*-Nickel
-Copper*-Silicon
-Copper*-Tin
-Copper*-Tin-Zinc
-Copper*-Zinc
-Gold*
-Lead
Electrical conductivity, **6**: 187
-Manganese
Absorption, index of, **5**: 251
Electrical conductivity, **6**: 172, 180
Equilibrium diagram, **2**: 450
Ferromagnetism, **6**: 406
Kerr constant, **6**: 435
Magnetic properties, **6**: 392-393
Refraction, index of, **5**: 251
Thermal conductivity, **5**: 225
Thermoelectric properties, **6**: 223
X-ray diffraction data, **1**: 351
-Manganese-Molybdenum
Electrical conductivity, **6**: 183
-Manganese-Molybdenum-Nickel-Silicon
Electrical conductivity, **6**: 182
-Manganese-Nickel
Electrical conductivity, **6**: 186
Equilibrium diagram, **2**: 455
Thermoelectric properties, **6**: 220
-Manganese-Nickel-Silicon
Electrical conductivity, **6**: 187
-Manganese-Phosphorus
Electrical conductivity, **6**: 182

* Data for system will be found under this compound in Index. Full explanation on page vii.

Iron.—(Continued)

- Manganese-Silicon*
Thermal expansion, **2**: 467, 473
- Mercuric chloride*
Electrode potential and free energy of reaction, **7**: 276
- Molybdenum*
Density, **2**: 594
Electrical conductivity, **6**: 183
Magnetic properties, **6**: 388
Thermoelectric properties, **6**: 223
- Molybdenum-Nickel*
Electrical conductivity, **6**: 187
- Molybdenum-Nickel-Silicon*
Electrical conductivity, **6**: 187
- Molybdenum-Vanadium*
Electrical conductivity, **6**: 183
- Nickel*
Absorption, index of, **5**: 251
Curie point, **6**: 394
Density, **2**: 481
Elastic properties, **2**: 481
Electrical conductivity, **6**: 184
Equilibrium diagram, **2**: 451
Hall effect, **6**: 417
Hardness, **2**: 480
Joule effect, **6**: 440
Kerr constant, **6**: 435
Magnetic moment, **6**: 346
Magnetic properties, **6**: 394–395
Magnetization by rotation, **6**: 347
Mechanical properties, **2**: 480
Nernst effect, **6**: 420
Refraction, index of, **5**: 251
Specific heat, **5**: 118
Thermal conductivity, **5**: 225
Thermal expansion, **2**: 467, 471, 472
Thermoelectric properties, **6**: 220, 223, 227
X-ray diffraction data, **1**: 351
- Nickel-Silicon*, **2**: 473
Electrical conductivity, **6**: 187
Thermal expansion, **2**: 474
- Nickel-Titanium*
Electrical conductivity, **6**: 187
- Nickel-Tungsten*
Electrical conductivity, **6**: 187
- Nickel-Vanadium*
Electrical conductivity, **6**: 187
- Nitrogen*
Equilibrium diagram, **2**: 451
- Oxygen*
Equilibrium diagram, **2**: 451
- Oxygen-Silica*
Freezing point-solubility, **4**: 92
- Phosphorus*
Electrical conductivity, **6**: 173, 187
Equilibrium diagram, **2**: 452
- Phosphorus-Sulfur*
Electrical conductivity, **6**: 173
- Platinum*
Equilibrium diagram, **2**: 452
- Silicon*
Density, **2**: 523, 594
Electrical conductivity, **6**: 173, 187
Equilibrium diagram, **2**: 453
Magnetic properties, **6**: 374, 396–400
Specific heat, **5**: 118
Tensile properties, **2**: 523
Thermal expansion, **2**: 467, 473
Thermoelectric properties, **6**: 223
X-ray diffraction data, **1**: 343, 349
- Silicon-Tin*
Electrical conductivity, **6**: 188
- Silicon-Vanadium*
Electrical conductivity, **6**: 188
Specific heat, **5**: 118
- Silver*
Electrical conductivity, **6**: 173

Iron.—(Continued)

- Sulfur*
Electrical conductivity, **6**: 173, 187
Equilibrium diagram, **2**: 452
- Thallium monochloride*
Free energy of reaction, **7**: 277
- Tin*
Electrical conductivity, **6**: 188
Equilibrium diagram, **2**: 452
- Titanium*
Equilibrium diagram, **2**: 453
Hardness, **2**: 478
Thermoelectric properties, **6**: 220
- Tungsten*
Electrical conductivity, **6**: 173, 189
Equilibrium diagram, **2**: 453
Thermal conductivity, **5**: 225
Thermoelectric properties, **6**: 223
- Vanadium*
Curie point, **6**: 410
Equilibrium diagrams, **2**: 453
Magnetic properties, **6**: 400–402
- Zinc*
Equilibrium diagram, **2**: 454
- Iron carbide**
Heat of formation, **5**: 191
X-ray diffraction data, **1**: 343
- Iron carbonyl**
Decomposition, equilibrium constant, **7**: 279
Density, **3**: 23
Magnetic susceptibility, **6**: 358
- Iron diarsenide**, specific heat, **5**: 98
- Iron disulfide**
Electrical conductivity, **6**: 148
Entropy, **5**: 90
Heat content, **5**: 90
Heat of formation, **5**: 191
Photoelectric current, **6**: 69
Specific heat, **5**: 90, 98
Thermal expansion, **3**: 44
Thermodynamic potential, **5**: 90
See also Marcasite, Pyrite.
- Iron monosulfide**, specific heat, **5**: 118
- Iron nitride**
Curie point, **6**: 410
Decomposition pressure, **7**: 279
Reduction with hydrogen, **7**: 279
- Iron orthosilicate.** *See* Fayalite.
- Iron oxide**, brightness temperature, **1**: 60
- Iron-platinum couple**
Thermoelectric power, **6**: 215
- Iron powder**, thermal conductivity under reduced pressures, **2**: 315
- Iron selenide**
Heat of formation, **5**: 191
X-ray diffraction data, **1**: 343
- Iron titanate.** *See* Ilmenite.
- Iron telluride**, heat of formation, **5**: 191
- Ironac**, **2**: 378, 473
- Ironier's bronze**, **2**: 378
- Irons**, list of, **2**: 390
- Irradiation**, definition, **1**: 38
- Isatin**
Absorption spectra, **5**: 342
Heat of combustion, **5**: 168
- Iserlohn (alloy)**, **2**: 378; *cf.* 555, 556, 601
- Isoaconitine**
Optical rotatory power, **7**: 478
- Isoamarine**
Optical rotatory power, **7**: 476
- Isoamyl acetate**
Absorption spectra, **5**: 333
Azeotropic mixtures, **3**: 321, 322
Boiling point, **3**: 346
Critical temperature, **3**: 249
Diffusion in methyl alcohol, **5**: 73
Heat of vaporization, **5**: 137
Refractive index, **7**: 42
Specific heat, **5**: 111
Surface tension, **4**: 457

Isoamyl acetate.—(Continued)

- Acetophenone**
- Alizarin**
- Allo-1-bromocinnamic acid**
- Allyl ethyl ether**
- Aniline**
- Anisaldoxime**
- o-Anisidine**
- Anisole**
- Azobenzene**
- Benzaldehyde phenylhydrazone**
- Benzaldoxime**
- Benzene**
- Benzil**
- Benziloximes**
- Benzoic acid**
- Benzophenone**
- Benzyl acetate**
- Benzyl alcohol**
- Benzylacetone**
- Benzylacetophenone**
- Benzylideneacetone**
- Benzylideneacetophenone**
- Bromoaniline (o-, m-, p-)**
- Carvoxime**
- Chloroaniline (o-, m-, p-)**
- Chlorophenol (o-, m-, p-)**
- Cinnamic acid**
- Cinnamylideneacetone**
- Cinnamylideneacetophenone**
- Cresol (o-, m-, p-)**
- Dibenzylideneacetone**
- 2, 4-Dibromoaniline**
- 2, 6-Dibromoaniline**
- p-Dibromobenzene**
- 2, 4-Dichloraniline**
- Dicinnamylideneacetone**
- 2, 4-Diiodoaniline**
- Diphenyl**
- Diphenylacetone**
- Diphenylacetylene**
- Diphenylamine**
- Diphenylbutadiene**
- Diphenylbutane**
- Diphenylcarbinol**
- Diphenylethane**
- Diphenylethylene**
- Elaidic acid**
- Ethyl acetate**
- Ethyl alcohol**
- Ethyl p-aminobenzoate**
- Ethyl anthranilate**
- Ethyl chloroacetate**
- Ethyl elaidate**
- Ethyl hydroxybenzoate**
- Ethyl m-hydroxybenzoate**
- Ethyl oleate**
- Ethyl propargyl ether**
- Ethyl propyl ether**
- Ethyl salicylate**
- Ethylene bromide**
- Eugenol**
- p-Iodoaniline**
- Isoeugenol*
Density, **3**: 190
- Isosafrole*
Density, **3**: 190
- Magnesium iodide*
Freezing point-solubility, **4**: 204
- Mandelic acid*
Density, **3**: 189
Viscosity, **5**: 50
- Menthyl cinnamate*
Density, **3**: 190
Viscosity, **5**: 50
- l-Menthyl mandelate*
Viscosity, **5**: 50
- Menthyl β -phenylpropionate*
Density, **3**: 190
Viscosity, **5**: 50

* Data for system will be found under this compound in Index. Full explanation on page vii.

Isoamyl acetate.—(Continued)

- Menthyl propiolate*
Density, **3**: 190
Viscosity, **5**: 50
- Mesityl oxide*
Density, **3**: 185
Viscosity, **5**: 49
- Methyl benzyl ether*
Density, **3**: 189
Viscosity, **5**: 50
- Methyl tolyl ether* (*o*-, *m*-, *p*-)
Density, **3**: 189
Viscosity, **5**: 50
- Naphthalene*
Density, **3**: 190
- Naphthol* (α -, β -)
Density, **3**: 190
Viscosity, **5**: 50
- Naphthylamine* (α -, β -)
Density **3**: 190
Viscosity, **5**: 50
- Nitroaniline* (*o*-, *m*-)
Density, **3**: 182
Viscosity, **5**: 47
- o*-*Nitrophenol*
Density, **3**: 178
Heat of solution, **5**: 154
Viscosity, **5**: 46
- m*-*Nitrophenol*
Density, **3**: 179
- p*-*Nitrophenol*
Density, **3**: 179
- Oleic acid*
Viscosity, **5**: 50
- Phenanthrene*
Density, **3**: 190
- Phenetole*
Density, **3**: 189
Viscosity, **5**: 50
- Phenol*
Density, **3**: 183
Viscosity, **5**: 47
- Phenyl acetate*
Density, **3**: 189
Viscosity, **5**: 50
- Phenylacetylene*
Density, **3**: 189
Viscosity, **5**: 50
- Phenylenediamine* (*o*-, *m*-)
Density, **3**: 185
Viscosity, **5**: 49
- Phenylethane*
Density, **3**: 189
Viscosity, **5**: 50
- Phenylethylene*
Density, **3**: 189
Viscosity, **5**: 50
- Phenylpropionic acid*
Density, **3**: 189
Viscosity, **5**: 50
- β -*Phenylpropionic acid*
Density, **3**: 189
Viscosity, **5**: 50
- Phorone*
Density, **3**: 190
Viscosity, **5**: 50
- Piperonal oxime*
Viscosity, **5**: 50
- Propargyl ethyl ether*
Density, **3**: 172
- Safrole*
Density, **3**: 190
Viscosity, **5**: 50
- Salicylaldehyde*
Density, **3**: 186
- Stearic acid*
Density, **3**: 190
- Toluidine* (*o*-, *m*-, *p*-)
Density, **3**: 189
Viscosity, **5**: 49

Isoamyl acetate.—(Continued)

- 2, 4, 6-*Tribromoaniline*
Density, **3**: 173
Viscosity, **5**: 43
- 2, 4, 6-*Trichloroaniline*
Density, **3**: 174
Viscosity, **5**: 43
- Triphenylcarbinol*
Density, **3**: 190
- Isoamyl alcohol**
Absorption spectra, **5**: 332
Adsorption by charcoal, **3**: 251
Azeotropic mixtures, **3**: 318–321
Boiling point, **3**: 220, 343
Compressibility, **3**: 36
Condensation on ions and nuclei, **6**: 117
Critical temperature, **3**: 248
Density, aqueous solution, **3**: 112, 114
Dielectric constant, **6**: 89
Diffusion in benzene, **5**: 74
Diffusion in ethyl alcohol, **5**: 74
Diffusion in methyl alcohol, **5**: 72
Diffusion in water, **5**: 70
Electrical conductivity, **6**: 144
Flash point, **2**: 161
Freezing point lowering of aqueous solution, **4**: 262
Heat of solution in water, **5**: 149
Heat of vaporization, **5**: 137
Ions, mobility of, in, **6**: 112
Magnetic susceptibility, **6**: 362
Polarization of light scattered by, **5**: 267
Refractive index, **7**: 12, 38
Solubility in water, **3**: 388
Solubility of salts in, **4**: 210
Specific heat, **5**: 109
Surface tension, **4**: 436, 453
Aqueous solution, **4**: 469
Thermal conductivity, **5**: 228
Pressure, effect of, **5**: 227
Vapor pressure, **3**: 220
Verdet constant, dispersion of, **6**: 434
Viscosity, **5**: 34, 43; **7**: 216, 223
- Ammonium iodide**
- Benzene**
- Benzil**
- Benzoic acid**
- Boric acid**
- Bromoform**
- Caffeine**
- Camphoric acid**
- Chloroform**
- Cinnamic acid**
- Citric acid**
- Diethylammonium chloride**
- Diethylaniline**
- Diphenylamine**
- Ethyl acetate**
- Ethyl alcohol**
- Ethyl ether**
- Ethylphenylammonium chloride**
- Formamide**
- Gallic acid**
- Glycerol**
- Heptane**
- Hexane**
- Isobutyl alcohol*
Heat of solution, **5**: 157
Miscibility in water, **3**: 417
- Isobutylammonium chloride*
Boiling point elevation, **3**: 343
- Lithium bromide*
Boiling point elevation, **3**: 343
- Lithium chloride*
Boiling point elevation, **3**: 343
- Lithium iodide*
Boiling point elevation, **3**: 343
- Lithium nitrate*
Boiling point elevation, **3**: 343

Isoamyl alcohol.—(Continued)

- Magnesium bromide*
Freezing point-solubility, **4**: 203
- Methyl alcohol*
Heat of solution, **5**: 156
Miscibility in water, **3**: 411
- Nitrobenzene*
Density, **3**: 173
Viscosity, **5**: 43
- o*-*Nitrobenzoic acid*
Boiling point elevation, **3**: 343
- Oleic acid*
Density, **3**: 173
- Paraldehyde*
Density, **3**: 173
Viscosity, **5**: 43
- Phenacetine*
Density, **3**: 173
- Phenyl salicylate*
Density, **3**: 173
- Potassium acetate*
Boiling point elevation, **3**: 343
- Propyl alcohol*
Heat of solution, **5**: 156
- Pyrogallol*
Boiling point elevation, **3**: 343
- Quinine*
Boiling point elevation, **3**: 343
- Quinine sulfate*
Boiling point elevation, **3**: 343
- N*-*Quinoline ethiodide*
Boiling point elevation, **3**: 343
- Salicylic acid*
Boiling point elevation, **3**: 343
Density, **3**: 173
- Sodium iodide*
Density, **3**: 141
- Sodium isoamylate*
Boiling point elevation, **3**: 343
- Stearic acid*
Density, **3**: 173
- Sulfonal*
Boiling point elevation, **3**: 343
- Tartaric acid*
Density, **3**: 165
- Tetraethylammonium bromide*
Boiling point elevation, **3**: 343
- Tetraethylammonium chloride*
Boiling point elevation, **3**: 343
- Tetraethylammonium iodide*
Boiling point elevation, **3**: 343
- Tetrapropylammonium iodide*
Boiling point elevation, **3**: 343
- Tetrapropylammonium nitrate*
Boiling point elevation, **3**: 343
- Triethylammonium bromide*
Boiling point elevation, **3**: 343
- Triethylammonium iodide*
Boiling point elevation, **3**: 343
- Isoamyl benzoate, compressibility, **3**: 37**
- Isoamyl bromide**
Azeotropic mixtures, **3**: 320–321
Dielectric constant, **6**: 89
Electrical conductivity, **6**: 144
Magnetic susceptibility, **6**: 362
Surface tension, **4**: 452
Verdet constant, **6**: 429
- Ethyl alcohol**
- Isoamyl butyrate**
Absorption spectra, **5**: 333
Azeotropic mixtures, **3**: 322–323
Critical temperature, **3**: 249
Dielectric constant, **6**: 94
Heat of vaporization, **5**: 137
Specific heat, **5**: 112
Surface tension, **4**: 437, 459
- Isoamyl chloride**
Birefringence, electric, **7**: 111
Dielectric constant, **6**: 89
Magnetic susceptibility, **6**: 362

* Data for system will be found under this compound in Index. Full explanation on page vii.

Isoamyl chloride.—(Continued)

Surface tension, **4**: 436, 452
Verdet constant, **6**: 429

Isoamyl chloroacetate

Dielectric constant, **6**: 92

Isoamyl chloroformate

Dielectric constant, **6**: 91

Isoamyl cyanide, surface tension, **4**: 455**Isoamyl ether**

Magnetic susceptibility, **6**: 363
Surface tension, **4**: 460
Verdet constant, **6**: 430
Viscosity, **5**: 41
-Ethyl acetate*
-Ethyl alcohol*

Isoamyl formate

Absorption spectra, **5**: 332
Azeotropic mixtures, **3**: 321–322
Boiling point, **3**: 222
Compressibility, **3**: 36
Critical point data, **3**: 249
Diffusion of vapor in air, **5**: 62
Heat of vaporization, **5**: 137
Solubility in water, **3**: 390
Specific heat, **5**: 110
Surface tension, **4**: 455
Aqueous solution, **4**: 469
Vapor pressure, **3**: 222
Viscosity, **5**: 43; **7**: 218
-Ethyl acetate*
-Ethyl alcohol*
-Propyl acetate
Viscosity, **5**: 43
-Propyl alcohol
Specific heat, **5**: 127

Isoamyl iodide

Absorption spectra, **5**: 338
Azeotropic mixtures, **3**: 320
Dielectric constant, **6**: 89
Diffusion in methyl alcohol, **5**: 72
Surface tension, **4**: 452
Verdet constant, **6**: 429

Isoamyl isobutyrate

Absorption spectra, **5**: 333
Heat of vaporization, **5**: 138
Specific heat, **5**: 112

Isoamyl lactate

Azeotropic mixtures, **3**: 322–323

Isoamyl nitrate

Interfacial tension, **4**: 438
Refractive index, **7**: 38
Surface tension, **4**: 452

Isoamyl nitrite

Refractive index, **7**: 38
Surface tension, **4**: 452

Isoamyl phenyl ether

-Diethylamine*

Isoamyl propionate

Absorption spectra, **5**: 333
Azeotropic mixtures, **3**: 319, 322
Critical temperature, **3**: 249
Dielectric constant, **6**: 94
Heat of vaporization, **5**: 137
Specific heat, **5**: 112
Surface tension, **4**: 458
-Hydrogen peroxide*

Isoamyl salicylate

Dielectric constant, **6**: 96

Isoamyl succinate, specific heat, **5**: 113**Isoamyl sulfide**

Critical temperature, **3**: 249

Isoamyl valerate

Dielectric constant, **6**: 95
Heat of vaporization, **5**: 138
Sound, velocity of, in vapor, **6**: 463
Specific heat, **5**: 113

Isoamylacetic acid

-Xylene
Distribution coefficients in water, **3**: 430

Isoamylamine

Absorption spectra, **5**: 332
Birefringence, electric, **7**: 111
Electrical conductivity, **6**: 144
Aqueous solution, **6**: 271
Freezing point lowering of aqueous solution, **4**: 262
Heat of combustion, **5**: 167
Magnetic susceptibility, **6**: 362
Refractive index, **7**: 38
Specific heat, **5**: 109
Surface tension, **4**: 453
Viscosity, **7**: 217
-Ethyl ether*
-Xylene
Distribution coefficients in water, **3**: 427

Isoamylaniline

Absorption spectra, **5**: 333
Viscosity, **7**: 221

Isoamylene

Compressibility, **3**: 36
Magnetic susceptibility, **6**: 362

Isoamylcoumaric acid

Heat of combustion, **5**: 166

cis.-Isoamylcoumarinic acid

Heat of combustion, **5**: 166

Isoamylmercaptan

Critical temperature, **3**: 248

Isoamylmethylal

Azeotropic mixtures, **3**: 322

Isoamyltriethyllead

Boiling point, **1**: 116, 163
Density, **1**: 116
Refractive index, **1**: 116, 165

Isoamyltrimethyllead

Boiling point, **1**: 116, 163
Density, **1**: 116
Refractive index, **1**: 116, 165

Isoanethole

-Chloroform*

Isoapiol

Absorption spectra, **5**: 348
Cryoscopic constant, **4**: 184
Refractive index, **7**: 57

Isoapogelsemine

Optical rotatory power, **7**: 476

Isobeberine

Optical rotatory power, **7**: 475

Isobebirine, optical rotatory power, **7**: 476**Isobehenic acid**

-Behenic acid*

Isoborneol, optical rotatory power, **7**: 454**Isobornyl acetate**

Optical rotatory power, **7**: 455
Refractive index, **7**: 58

Isobutane

Boiling point, **3**: 219
Critical point data, **3**: 244, 248
Density, gas, **3**: 3
Heat of combustion, **5**: 163
Heat of vaporization, **5**: 137
Ignition temperature, **2**: 174
Specific heat
Gas, **5**: 80
Liquid, **5**: 108
Vapor pressure, **3**: 219
Vapor pressure above 1 atm., **3**: 244
Viscosity, gas, **5**: 3
-Methyl alcohol
Solubility, mutual, **3**: 397

Isobutenylbenzene

Verdet constant, **6**: 430

1-Isobutenyl-1-cyclohexene

Heat of combustion, **5**: 163

Isobutyl acetate

Absorption spectra, **5**: 332
Azeotropic mixtures, **3**: 319, 321
Compressibility, **3**: 36
Critical point data, **3**: 243, 249
Density, **3**: 29, 33

Isobutyl acetate.—(Continued)

Dielectric constant, **6**: 91
Diffusion of vapor in gases, **5**: 62
Electrical conductivity, **6**: 145
Heat of vaporization, **5**: 137
Magnetic susceptibility, **6**: 362
Refractive index, **7**: 40
Solubility in water, **3**: 390
Specific heat, **5**: 110
Surface tension, **4**: 455
Aqueous solution, **4**: 469
Vapor pressure, **3**: 222
Vapor pressure above 1 atm., **3**: 243
Verdet constant, **6**: 429
Viscosity, **7**: 218
-Ethyl butyrate*
-Ethyl isobutyrate*
-Ethyl isovalerate*
-Magnesium iodide
Freezing point-solubility, **4**: 204
-Methylal
Surface tension, **4**: 472

Isobutyl alcohol

Absorption, index of, **6**: 98
Absorption spectra, **5**: 332, 337
Azeotropic mixtures, **3**: 318–321
Birefringence, **7**: 111
Boiling point, **3**: 219, 341
Compressibility, **3**: 42
Condensation on ions and nuclei, **6**: 117
Critical point data, **3**: 248
Density, **3**: 28, 33
Aqueous solution, **3**: 112–114
Dielectric absorption, **6**: 87, 98
Dielectric constant, **6**: 87
Dielectric dispersion, **6**: 98
Diffusion of vapor in gases, **5**: 62
Electrical conductivity, **6**: 143
Flash point, **2**: 161
Heat of combustion, **5**: 164
Heat of solution in water, **5**: 149
Heat of vaporization, **5**: 137
Inflammability, limits of, **2**: 180
Ions, mobility of, in, **6**: 112
Magnetic susceptibility, **6**: 361
Polarization of light reflected from, **5**: 261
Polarization of light scattered by
Gas, **5**: 266
Liquid, **5**: 266
Refractive index, **6**: 98; **7**: 36, 79
Solubility in water, **3**: 388
Pressure, effect of, **3**: 393
Solubility of salts in, **4**: 210
Specific heat, **5**: 108
Aqueous solution, **5**: 125
Surface tension, **4**: 436, 451
Aqueous solution, **4**: 468
Thermal conductivity, **5**: 228
Vapor pressure, **3**: 219
Aqueous solution, **3**: 365
Verdet constant, **6**: 426
Dispersion, **6**: 433, 434
Viscosity, **5**: 33; **7**: 215, 223
-Acetic acid*
-Alizarin*
-Ammonium perchlorate*
-Barium perchlorate*
-Benzene*
-Benzil*
-Boric acid*
-Bromonaphthalene*
-Calcium perchlorate*
-Camphor*
-Carbon disulfide*
-Carbon tetrachloride*
-Cesium perchlorate*
-Chloroform*
-Cyanobenzene*
-p-Dibromobenzene*
-Diethyl tartrate*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Isobutyl alcohol.—(Continued)

- Diethylamine*
 - Dipropyl tartrate*
 - Dyes*
 - Ethyl acetate*
 - Ethyl alcohol*
 - Ethyl ether*
 - Ethylene cyanide*
 - Formamide*
 - Fuchsin*
 - Heptane*
 - Hydrogen peroxide*
 - Iodine*-Potassium iodide
 - Isoamyl alcohol*
 - Lithium bromide
 - Boiling point elevation, **3**: 342
 - Lithium chloride
 - Boiling point elevation, **3**: 341
 - Lithium iodide
 - Boiling point elevation, **3**: 342
 - Lithium nitrate
 - Boiling point elevation, **3**: 342
 - Lithium perchlorate
 - Density, **3**: 141
 - Magnesium bromide
 - Freezing point-solubility, **4**: 203
 - Magnesium perchlorate
 - Density, **3**: 140
 - Menthol
 - Boiling point elevation, **3**: 341
 - Methyl alcohol
 - Density, **3**: 151
 - Heat of solution, **5**: 156
 - Refractive index, **7**: 79
 - Methylene iodide
 - Solubility, mutual, **3**: 397
 - Nicotine
 - Density, **3**: 167
 - Nitrobenzene
 - Density, **3**: 167
 - Potassium hydroxide
 - Distribution coefficients in water, **3**: 422
 - Potassium perchlorate
 - Density, **3**: 142
 - Propyl alcohol
 - Heat of solution, **5**: 156
 - Rubidium perchlorate
 - Density, **3**: 142
 - Sodium chloride
 - Density, **3**: 141
 - Sodium hydroxide
 - Distribution coefficients in water, **3**: 422
 - Strontium perchlorate
 - Density, **3**: 140
 - m-Xylene
 - Dielectric constant, **6**: 102
- Isobutyl amyl ketone**
Verdet constant, **6**: 430
- Isobutyl benzoate**
Dielectric constant, **6**: 96
Electrical conductivity, **6**: 145
Thermal conductivity, **5**: 228
Verdet constant, **6**: 430
- Isobutyl bromide**
Absorption spectra, **5**: 332
Azeotropic mixtures, **3**: 320–321, 323
Birefringence, electric, **7**: 111
Boiling point, **3**: 341
Dielectric constant, **6**: 87
Polarization of light scattered by, **5**: 266
Surface tension, **4**: 451
Thermal conductivity, **5**: 228
Verdet constant, **6**: 428
Viscosity, **7**: 215
-Acetanilide*
-Benzoic acid*
-Bromocamphor*
-Ethyl alcohol*
-Naphthalene
Boiling point elevation, **3**: 341

Isobutyl butyrate

- Azeotropic mixtures, **3**: 322
 - Critical temperature, **3**: 249
 - Dielectric constant, **6**: 94
 - Diffusion of vapor in gases, **5**: 63
 - Electrical conductivity, **6**: 145
 - Heat of vaporization, **5**: 137
 - Polarization of light scattered by, **5**: 267
 - Sound, velocity of, in vapor, **6**: 463
 - Specific heat, **5**: 112
 - Surface tension, **4**: 458
 - Thermal conductivity, **5**: 228
 - Viscosity, **7**: 220
 - Hydrogen peroxide*
- Isobutyl chloride**
Absorption spectra, **5**: 332
Azeotropic mixtures, **3**: 318–321, 323
Dielectric constant, **6**: 87
Heat of combustion, **5**: 169
Polarization of light scattered by, **5**: 266
Surface tension, **4**: 436, 451
Thermal conductivity, **5**: 228
Verdet constant, **6**: 428
Viscosity, **7**: 215
-Benzene*
-Heptane*
-Pyridine
Heat of solution, **5**: 153
- Isobutyl chloroformate**
Dielectric constant, **6**: 88
- Isobutyl cyanide, dielectric constant, 6: 88**
- Isobutyl cyanoacetate**
Surface tension, **4**: 457
- Isobutyl diacetate-d-tartrate**
-Nitrobenzene
Density, **3**: 178
-o-Nitrotoluene
Density, **3**: 187
-Quinoline
Density, **3**: 193
-Tetrachloroethane
Density, **3**: 154
- Isobutyl dibenzoyl-d-tartrate**
-Cinnamaldehyde*
-Ethylene bromide*
- Isobutyl di(trichloroacetyl)tartrate**
-Nitrobenzene
Density, **3**: 178
- Isobutyl ether, viscosity, 7: 220**
- Isobutyl fluoride, density, 3: 3**
- Isobutyl formate**
Absorption spectra, **5**: 332
Azeotropic mixtures, **3**: 320
Boiling point, **3**: 220
Compressibility, **3**: 36
Critical point data, **3**: 242, 248
Dielectric constant, **6**: 88
Diffusion of vapor in air, **5**: 62
Electrical conductivity, **6**: 145
Heat of vaporization, **5**: 137
Refractive index, **7**: 37
Solubility in water, **3**: 388
Surface tension, **4**: 452
Aqueous solution, **4**: 469
Vapor pressure, **3**: 220
Vapor pressure above 1 atm., **3**: 242
Viscosity
Gas, **5**: 4
Liquid, **7**: 216
-Ethyl acetate*
-Ethyl propionate*
-Ethylbenzene*
-Propyl acetate
Density, **3**: 172
-Propyl formate
Density, **3**: 167
- Isobutyl heptate, viscosity, 7: 221**
- Isobutyl iodide**
Absorption spectra, **5**: 332, 337
Azeotropic mixtures, **3**: 320–321
Dielectric constant, **6**: 87

Isobutyl iodide.—(Continued)

- Refractive index, **7**: 36
 - Surface tension, **4**: 451
 - Thermal conductivity, **5**: 228
 - Verdet constant, **6**: 428
 - Viscosity, **7**: 215
- Isobutyl isobutyrate**
Critical temperature, **3**: 249
Diffusion of vapor in gases, **5**: 63
Heat of vaporization, **5**: 137
Surface tension, **4**: 458
- Isobutyl isovalerate**
Critical temperature, **3**: 249
Heat of vaporization, **5**: 138
Surface tension, **4**: 459
- Isobutyl lactate**
Azeotropic mixtures, **3**: 322
- Isobutyl laurate, viscosity, 7: 222**
- Isobutyl d-mandelate**
-Isobutyl l-mandelate
Freezing point-solubility, **4**: 161
- Isobutyl myristate, viscosity, 7: 222**
- Isobutyl nitrate**
Dielectric constant, **6**: 87
Electrical conductivity, **6**: 143
Refractive index, **7**: 36
- Isobutyl nitrite**
Heat of combustion, **5**: 167
Refractive index, **7**: 36
- Isobutyl nonoate, viscosity, 7: 221**
- Isobutyl octoate, viscosity, 7: 221**
- Isobutyl phenyl ketone**
Absorption spectra, **5**: 333
Refractive index, **7**: 54
- Isobutyl phenylpropiolate**
Surface tension, **4**: 461
- Isobutyl propionate**
Azeotropic mixtures, **3**: 321, 322
Critical temperature, **3**: 249
Diffusion of vapor in gases, **5**: 62
Heat of vaporization, **5**: 137
Surface tension, **4**: 457
Viscosity, **7**: 219
- Isobutyl ricinoleate**
Dielectric constant, **6**: 97
Surface tension, **4**: 463
-Acetone*
- Isobutyl succinate, specific heat, 5: 113**
- Isobutyl tartrate**
-Quinoline
Density, **3**: 193
-Sulfur dioxide
Boiling point elevation, **3**: 328
-Tetrachloroethane
Density, **3**: 154
- Isobutyl undecate, viscosity, 7: 221**
- Isobutyl valerate**
Boiling point, **3**: 226
Dielectric constant, **6**: 94
Diffusion of vapor in gases, **5**: 63
Electrical conductivity, **6**: 145
Heat of vaporization, **5**: 138
Thermal conductivity, **5**: 228
Vapor pressure, **3**: 226
Viscosity, **7**: 220
- Isobutylacetamide**
Boiling point elevation in aqueous solution, **3**: 327
-Acetone*
-Benzene*
-Chloroform*
-Ethyl alcohol*
-Ethyl ether*
- Isobutylacetic acid**
Heat of combustion, **5**: 165
- Isobutylamine**
Dielectric constant, **6**: 88
Diffusion of vapor in air, **5**: 62
Electrical conductivity, aqueous solution, **6**: 268
Heat of combustion, **5**: 167

* Data for system will be found under this compound in Index. Full explanation on page vii.

Isobutylamine.—(Continued)

- Heat of solution in water, **5**: 149
- Magnetic susceptibility, **6**: 361
- Refractive index, **7**: 36
- Surface tension, **4**: 451
- Thermal conductivity, gas, **5**: 214
- Viscosity
 - Gas, **5**: 4
 - Liquid, **7**: 216

-Xylene

- Distribution coefficients in water, **3**: 426

Isobutylammonium chloride

- Boiling point elevation in aqueous solution, **3**: 327

-Acetonitrile*

-Chloroform*

-Ethyl alcohol*

-Isoamyl alcohol*

Isobutylammonium iodide

-Chloroform*

Isobutylbenzene

- Boiling point, **3**: 226
- Dielectric constant, **6**: 95
- Refractive index, **7**: 51
- Vapor pressure, **3**: 226
- Verdet constant, **6**: 430

Isobutylcarbinol

- Verdet constant, **6**: 429

Isobutylene

- Absorption spectra, **5**: 337
- Heat of combustion, **5**: 163
- Solubility in ethyl alcohol, **3**: 269

Isobutylene bromide

- Dielectric constant, **6**: 87

Isobutylideneazine

- Magnetic susceptibility, **6**: 363

Isobutyltriethyllead

- Boiling point, **1**: 116, 163
- Density, **1**: 116
- Refractive index, **1**: 116, 165

Isobutyltrimethyllead

- Boiling point, **1**: 116, 163
- Density, **1**: 116
- Refractive index, **1**: 116, 165

Isobutyraldehyde

- Absorption spectra, **5**: 332, 365
- Refractive index, **7**: 36
- Solubility in water, **3**: 387
- Verdet constant, **6**: 428

Isobutyraldoxime

- Magnetic susceptibility, **6**: 361

Isobutyramide

- Boiling point elevation in aqueous solution, **3**: 327
- Heat of combustion, **5**: 167
- Acetone*
- Benzene*
- Chloroform*
- Ethyl alcohol*

Isobutyric acid

- Absorption spectra, **5**: 332
- Azeotropic mixtures, **3**: 318, 320–321
- Birefringence, electric, **7**: 111
- Boiling point, **3**: 219
- Condensation on ions and nuclei, **6**: 117
- Critical point data, **3**: 241, 248
- Density, **3**: 28, 33
 - Aqueous solution, **3**: 112–114
- Dielectric constant, **6**: 87
- Diffusion of vapor in gases, **5**: 62
- Electrical conductivity, aqueous solution, **6**: 267
- Freezing point lowering of aqueous solution, **4**: 262
- Heat of combustion, **5**: 165
- Heat of solution in water, **5**: 149
- Heat of vaporization, **5**: 137
- Magnetic susceptibility, **6**: 361
- Orthobaric density, **3**: 241
- Refractive index, **7**: 36

Isobutyric acid.—(Continued)

- Solubility in water, **3**: 388
- Pressure, effect of, **3**: 393
- Sound, velocity of, in vapor, **6**: 463
- Specific heat, **5**: 108
- Surface tension, **4**: 451
 - Aqueous solution, **4**: 468
- Thermal conductivity, **5**: 228
- Vapor pressure, **3**: 219
- Vapor pressure above 1 atm., **3**: 241
- Verdet constant, **6**: 426
 - Dispersion, **6**: 433, 434
- Viscosity
 - Aqueous solution, **5**: 21
 - Liquid, **5**: 36; **7**: 215
- Acetic acid*
- Ammonium acetate*
- Ammonium formate*
- Ammonium isobutyrate*
- Benzene*
- Carbon disulfide*
- Carbon tetrachloride*
- Chloroform*
- Ethyl ether*
- Isocaproic acid
 - Surface tension of aqueous solution, **4**: 470
- Isovaleric acid
 - Surface tension of aqueous solution, **4**: 470
- Naphthalene
 - Freezing point-solubility, **4**: 115
- Potassium acetate
 - Density, aqueous solution, **3**: 103
- Potassium formate
 - Density, aqueous solution, **3**: 103
- Potassium isobutyrate
 - Density, aqueous solution, **3**: 103
- Sodium acetate
 - Density, aqueous solution, **3**: 102
- Sodium formate
 - Density, aqueous solution, **3**: 102
- Sodium isobutyrate
 - Density, aqueous solution, **3**: 102
- Toluene
 - Distribution coefficients in water, **3**: 426
- Xylene
 - Distribution coefficients in water, **3**: 426

Isobutyric anhydride

- Dielectric constant, **6**: 94
- Electrical conductivity, **6**: 144

Isobutyronitrile, dielectric constant, **6**: 87**Isocamphane**

- Optical rotatory power, **7**: 434

Isocampholytic acid

- Electrical conductivity, aqueous solution, **6**: 292
- Heat of combustion, **5**: 165

Isocamphoric acid

- Electrical conductivity, aqueous solution, **6**: 296
- Optical rotatory power, **7**: 446

d-Isocamphoric acid

- l*-Isocamphoric acid
 - Freezing point-solubility, **4**: 159

Isocaproic acid

- Absorption spectra, **5**: 332
- Boiling point, **3**: 222
- Diffusion of vapor in air, **5**: 62
- Electrical conductivity, aqueous solution, **6**: 276
- Surface tension, **4**: 455
 - Aqueous solution, **4**: 469
- Thermal conductivity, **5**: 228
- Vapor pressure, **3**: 222
- Chloroform*
- Isobutyric acid*
- Xylene
 - Distribution coefficients in water, **3**: 428

Isocapronitrile, dielectric constant, **6**: 19**Isocinnamic acid**, electrical conductivity, aqueous solution, **6**: 290**Isoclasite**

- Density, **1**: 143
- Refractive index, **1**: 143, 170

Isocodeine

- Crystallography, **1**: 335
- Optical rotatory power, **7**: 468
- Refractive index, **7**: 30

Isocorybulbine

- Optical rotatory power, **7**: 476

Isocorydine, optical rotatory power, **7**: 476**Isodulcitol**, osmotic pressure, **4**: 430**Isoemetine**, optical rotatory power, **7**: 477**Isoerucic acid**

- Cryoscopic constant, **4**: 184
- Behenic acid*
- Brassicidic acid*
- Erucic acid*

Isoeugenol

- Birefringence, magnetic, **7**: 111
- Magnetic susceptibility, **6**: 363
- Refractive index, **7**: 50
- Viscosity, **7**: 220
- Isoamyl acetate*

Isoeugenol benzoate

-Eugenol benzoate*

Isofenchocamphoric acid

- Electrical conductivity, aqueous solution, **6**: 296
- Optical rotatory power, **7**: 446

Isoheptane

- Specific heat, **5**: 111
- Aniline*

Isohexane

- Compressibility, **3**: 36
- Verdet constant, **6**: 429
- Viscosity, **7**: 218
- Aniline*
- Ethyl isobutyrate*
- Hexane*
- Propyl acetate
 - Density, **3**: 172

Isohexylamine, surface tension, **4**: 455**Isohydrobenzoin**

- Heat of combustion, **5**: 164

Isohydroxy-3, 7-dimethyluric acid

- Refractive index, **7**: 30

Isoleucine, optical rotatory power, **7**: 404**Isomorphine**, optical rotatory power, **7**: 467**Isonitrosocamphor**

- Absorption spectra, **5**: 346
- Optical rotatory power, **7**: 441

Isooctane

-Aniline*

Isoolivile, optical rotatory power, **7**: 462**Isopentane**

- Azeotropic mixtures, **3**: 319–320, 324
- Boiling point, **1**: 61; **3**: 220
- Compressibility, **3**: 38, 39
- Critical point data, **3**: 244, 248
- Heat of combustion, **5**: 163
- Heat of vaporization, **5**: 137
- Inflammability, limits of, **2**: 179
- Melting point, **1**: 54
- Orthobaric density, **3**: 244
- Polarization of light scattered by
 - Gas, **5**: 266
 - Liquid, **5**: 267
- Solidification point, **1**: 61
- Specific heat
 - Gas, **5**: 81
 - Liquid, **5**: 109
- Surface tension, **4**: 436, 453
- Thermal conductivity, gas, **5**: 214, 215
- Vapor pressure, **3**: 220
- Vapor pressure above 1 atm., **3**: 244
- Verdet constant, **6**: 429

Isopentane.—(Continued)

- Viscosity
 - Gas, **5**: 4
 - Liquid, **7**: 216, 223
- Aniline*
- Carbon dioxide*
- Diphenylamine*
- Ethyl alcohol*
- Ethyl propionate*
- Hexane*
- Methyl alcohol
 - Vapor pressure, **3**: 360
- Nitrobenzene
 - Boiling point, **3**: 313
 - Solubility, mutual, **3**: 396, 397
- Phenol
 - Solubility, mutual, **3**: 396
- Trimethylbenzene
 - Density, **3**: 173
- Isophthalic acid**
 - Absorption spectra, **5**: 342
 - Electrical conductivity, aqueous solution, **6**: 284
 - Heat of combustion, **5**: 165
 - Ethyl ether*
- Isoprene**
 - Absorption spectra, **5**: 337, 364
 - Birefringence, magnetic, **7**: 111
 - Viscosity, **7**: 216
- Isopropyl acetate**
 - Flash point, **2**: 162
 - Viscosity, **7**: 216
- Isopropyl alcohol**
 - Absorption spectra, **5**: 332, 336
 - Azeotropic mixtures, **3**: 318–321, 323–324
 - Boiling point, **3**: 218, 340
 - Aqueous solution, **3**: 310
 - Compressibility, **3**: 36
 - Critical point data, **3**: 248
 - Density, **3**: 28, 33
 - Aqueous solution, **3**: 120; **7**: 68
 - Dielectric constant, **6**: 86
 - Diffusion of vapor in air, **5**: 62
 - Electrical conductivity, **6**: 143
 - Flash point, **2**: 161
 - Freezing point lowering of aqueous solution, **4**: 262
 - Heat of combustion, **5**: 164
 - Heat of fusion, **5**: 132
 - Heat of solution in water, **5**: 148
 - Heat of vaporization, **5**: 137, 138
 - Inflammability, limits of, **2**: 180
 - Polarization of light reflected from, **5**: 261
 - Polarization of light scattered by
 - Gas, **5**: 265
 - Liquid, **5**: 266
 - Refractive index, **7**: 12, 35
 - Aqueous solution, **7**: 68
 - Specific heat, solid, **5**: 102
 - Surface tension, **4**: 450
 - Aqueous solution, **4**: 467
 - Thermal conductivity, **5**: 228
 - Pressure, effect of, **5**: 227
 - Vapor pressure, **3**: 218
 - Verdet constant, dispersion of, **6**: 434
 - Viscosity
 - Gas, **5**: 3
 - Liquid, **7**: 215, 222
 - X-rays, absorption coefficient, **6**: 14
- Acetone*
- Butyl alcohol*
- Cadmium iodide*
- Ethyl alcohol*
- Magnesium bromide
 - Freezing point-solubility, **4**: 203
- Magnesium iodide
 - Freezing point-solubility, **4**: 204
- Methyl alcohol
 - Heat of solution, **5**: 155

Isopropyl alcohol.—(Continued)

- Methylene iodide
 - Solubility, mutual, **3**: 397
- Potassium carbonate
 - Miscibility in water, **3**: 414
- Potassium fluoride
 - Miscibility in water, **3**: 414
- Isopropyl amyl ketone**
 - Verdet constant, **6**: 430
- Isopropyl benzoate**
 - Verdet constant, **6**: 430
- Isopropyl bromide**
 - Diffusion of vapor in air, **5**: 62
 - Magnetic susceptibility, **6**: 361
 - Refractive index, **7**: 35
 - Solubility in water, **3**: 387
 - Specific heat, gas, **5**: 80
 - Surface tension, **4**: 450
 - Verdet constant, **6**: 428
 - Viscosity
 - Gas, **5**: 3
 - Liquid, **7**: 214
- Isopropyl butyl ketone**
 - Verdet constant, **6**: 430
- Isopropyl carbinols**
 - Optical rotatory power, **7**: 360
- Isopropyl chloride**
 - Dielectric constant, **6**: 82
 - Polarization of light scattered by, **5**: 266
 - Solubility in water, **3**: 387
 - Specific heat, gas, **5**: 80
 - Vapor pressure, **3**: 218
 - Verdet constant, **6**: 428
 - Viscosity, **7**: 214
- Isopropyl ether**, viscosity, **7**: 218
- Isopropyl formate**
 - Flash point, **2**: 162
 - Verdet constant, **6**: 428
 - Viscosity, **7**: 215
- Isopropyl hexyl ketone**
 - Verdet constant, **6**: 430
- Isopropyl hydrocinnamate**
 - Surface tension, **4**: 461
- Isopropyl iodide**
 - Absorption spectra, **5**: 332
 - Density, **3**: 28, 33
 - Diffusion of vapor in air, **5**: 62
 - Heat of combustion, **5**: 168
 - Refractive index, **7**: 35
 - Solubility in water, **3**: 387
 - Surface tension, **4**: 450
 - Vapor pressure, **3**: 218
 - Verdet constant, **6**: 428
 - Viscosity, **7**: 214
- Benzene*
- Isopropyl isobutyrate**
 - Boiling point, **3**: 224
 - Diffusion of vapor in air, **5**: 62
 - Orthobaric density, **3**: 243
 - Vapor pressure, **3**: 224
 - Vapor pressure above 1 atm., **3**: 243
- Isopropyl methyl ketone**
 - Absorption spectra, **5**: 332, 338
- Isopropyl nitrite**
 - Dielectric constant, **6**: 86
- Isopropyl octyl ketone**
 - Verdet constant, **6**: 430
- Isopropyl phenyl ketone**
 - Absorption spectra, **5**: 333
 - Refractive index, **7**: 50
- Isopropyl propionate**
 - Verdet constant, **6**: 429
- Isopropylamine**
 - Dielectric constant, **6**: 86
 - Electrical conductivity, aqueous solution, **6**: 265
 - Refractive index, **7**: 35
 - Surface tension, **4**: 450
- Isopropylbenzene**
 - Compressibility, **3**: 37
 - Diffusion of vapor in air, **5**: 63

Isopropylbenzene.—(Continued)

- Heat of combustion, **5**: 163
- Refractive index, **7**: 47
- Verdet constant, **6**: 430
- Isopropylbutylcarbinol**, viscosity, **7**: 220
- 1-Isopropylcyclohex-1-ene**
 - Heat of combustion, **5**: 163
- Isopropylene glycol**
 - Heat of combustion, **5**: 164
- Isopropylethane**, dielectric constant, **6**: 82
- Isopropylhexylcarbinol**, viscosity, **7**: 221
- Isopropylmalonic acid**
 - Electrical conductivity, aqueous solution, **6**: 276
 - Heat of combustion, **5**: 165
- 3-Isopropyltoluene**
 - Heat of combustion, **5**: 163
- 4-Isopropyltoluene.** See Cymene.
- Isopropylurethan**, surface tension, **4**: 455
- Isopulegol**, optical rotatory power, **7**: 412
- Isoquinine**
 - Absorption spectra, **5**: 370
 - Optical rotatory power, **7**: 472
- Isoquinoline**
 - Absorption spectra, **5**: 344, 363
 - Refractive index, **7**: 45
 - Viscosity, **7**: 220
- Isorhodeose**, optical rotatory power, **7**: 389
- Isosafrole**
 - Absorption spectra, **5**: 346
 - Birefringence, magnetic, **7**: 111
 - Dielectric constant, **6**: 95
 - Diffusion of vapor in air, **5**: 63
 - Magnetic susceptibility, **6**: 363
 - Refractive index, **7**: 49
- Isoamyl acetate*
- Isoserine**, heat of combustion, **5**: 167
- Isostilbene**, heat of combustion, **5**: 164
- Isostrychnine**
 - Optical rotatory power, **7**: 473
- Isosuccinic acid**
 - Electrical conductivity, aqueous solution, **6**: 267
 - Heat of solution in water, **5**: 149
- Isothermal compression**, heat of, **5**: 147
- Isothiocyanatopentamminecobaltic chromate**
 - Solubility in aqueous solutions, **7**: 336
- Isotopes**
 - Radioactive, **1**: 363
 - Table of, **1**: 45
- Isovaleraldehyde**
 - Absorption spectra, **5**: 332
 - Electrical conductivity, **6**: 144
 - Magnetic susceptibility, **6**: 362
 - Surface tension, **4**: 452
 - Verdet constant, **6**: 428
- Isovaleraldoxime**
 - Refractive index, **7**: 38
 - Surface tension, **4**: 452
- Isovaleramide**
 - Ethyl alcohol*
- Isovaleric acid**
 - Absorption spectra, **5**: 338
 - Azeotropic mixtures, **3**: 319, 321
 - Condensation on ions and nuclei, **6**: 117
 - Critical temperature, **3**: 248
 - Density, aqueous solution, **3**: 112, 114
 - Dielectric constant, **6**: 88
 - Diffusion of vapor in gases, **5**: 62
 - Electrical conductivity, **6**: 144
 - Aqueous solution, **6**: 270
 - Heat of solution in water, **5**: 149
 - Heat of vaporization, **5**: 137
 - Magnetic susceptibility, **6**: 362
 - Optical rotatory power, **7**: 403
 - Refractive index, **7**: 37
 - Solubility in water, **3**: 393
 - Specific heat, **5**: 109
 - Surface tension, **4**: 436, 452
 - Aqueous solution, **4**: 469

* Data for system will be found under this compound in Index. Full explanation on page vii.

Isovaleric acid.—(Continued)

- Thermal conductivity, **5**: 228
- Vapor pressure, **3**: 219
- Verdet constant, **6**: 426
- Dispersion, **6**: 433, 434
- Viscosity
 - Aqueous solution, **5**: 21
 - Liquid, **7**: 216
- Barium isovalerate*
- Benzene*
- Carbon disulfide*
- Carbon tetrachloride*
- Chloroform*
- 1, 1-Dichloroethane*
- Ethyl ether*
- Isobutyric acid*
- Xylene
- Distribution coefficients in water, **3**: 427

Isovaleronitrile

- Surface tension, **4**: 436, 452

Isovalerylphenylacetylene

- Verdet constant, **6**: 431

Itaconic acid

- Absorption spectra, **5**: 337
- Crystallography, **1**: 325
- Density, aqueous solution, **3**: 114
- Electrical conductivity, aqueous solution, **6**: 269
- Heat of combustion, **5**: 165
- Heat of solution in water, **5**: 149
- Viscosity, aqueous solution, **5**: 21
- Ethyl ether*

Itaconic anhydride

- Heat of combustion, **5**: 166

Italy, weights and measures, 1: 8**Ivory**

- Density, **2**: 311
- Electrical conductivity, **2**: 310
- Sound, velocity of, in, **6**: 466
- Thermal conductivity, **5**: 217

J-Phenomenon, 6: 1**Jacana metal, 2: 378****Jacobsite, density, 1: 130****Jacoby metal, 2: 378; cf. 476, 557****Jadeite**

- Density, **1**: 153
- Melting point, **1**: 153
- Refractive index, **1**: 153, 172

Jalapinolic acid

- Optical rotatory power, **7**: 367

Jalcasse steel, 2: 378**Jamesonite**

- Density, **1**: 129
- Photoconductivity, **6**: 66

Japan, weights and measures, 1: 9**Jarosite**

- Density, **1**: 157
- Refractive index, **1**: 157, 167

Jelly strength, definition, 2: 220**Jeremejevite**

- Density, **1**: 138
- Refractive index, **1**: 138, 167

Jewelers metal, 2: 378; cf. 469, 555**Joints**

- Metal, strength of, **2**: 219
- Wood, strength of, **2**: 218, 219

Jongdala wood

- Thermal conductivity, **2**: 313

Jordanite, density, 1: 116**Joule, definition, 1: 38****Joule effect, 6: 439**

- Transverse, **6**: 439

Joule-Thomson effect, 5: 144**Jupiter, characteristics, 1: 392****Jute**

- Density, **2**: 237
- Moisture content at various humidities, **2**: 323
- Strength properties, **2**: 236

K-radiation, 6: 11**K_α doublet, spread of, 6: 29****K.L. steel, 2: 378; cf. 472****K.S. magnet steel, 2: 378****Kainite**

- Density, **1**: 158
- Refractive index, **1**: 158, 169

Kalchoids (alloy), 2: 378**Kalichite**

- Density, **1**: 155
- Refractive index, **1**: 155, 168

Kalinite

- Density, **1**: 158
- Refractive index, **1**: 158, 165, 168

Kaliophillite

- Density, **1**: 158
- Melting point, **4**: 85
- Refractive index, **1**: 158, 166
- Transformation temperature, **4**: 85
- Nephelite
- Freezing point-solubility, **4**: 91, 92

Kamarsch bearing alloys, 2: 378**Kaolin**

- Dehydration behavior, **7**: 312
- Expansion on heating, **2**: 84
- Moisture content at various humidities, **2**: 316, 324
- See also Clays.

Kaolinite

- Density, **1**: 137
- Heat of formation, **5**: 194
- Refractive index, **1**: 137, 170

Kapok

- Density, **2**: 312
- Thermal conductivity, **2**: 312

Karat, definition, 1: 38**Karma (alloy), 2: 378; cf. 480, 608**

- Electrical conductivity, **6**: 193

Kasolite, density, 1: 134**Keene's alloy, 2: 378****Kelmet (alloy), 2: 378; cf. 562****Kelvin, definition, 1: 38****Kempite**

- Density, **1**: 127
- Refractive index, **1**: 127, 172

Kentrolite

- Density, **1**: 128
- Refractive index, **1**: 128, 173

Kermesite

- Density, **1**: 111
- Refractive index, **1**: 111, 174

Kern's hydraulic bronze, 2: 378; cf. 570, 572**Kerosene**

- Compressibility, **2**: 146
- Density, **2**: 140
- Electrical conductivity, **6**: 146
- Emission, spectral, **5**: 257
- Flash point, **2**: 150
- Heat of vaporization, **2**: 151
- Ignition temperature, **2**: 151
- Light absorption, coefficient of, **2**: 153
- Penetrativity, **2**: 146
- Petroleum, content of, **2**: 139
- Refractive index, **2**: 153
- Solubility in water, **3**: 392
- Surface tension, **2**: 146
- Thermal conductivity, **2**: 151; **5**: 228
- Pressure, effect of, **5**: 227
- Thermal diffusivity, **2**: 151
- Vapor pressure, **2**: 149
- Viscosity, **2**: 146
- Acetic acid*
- Formic acid*
- Oleates
- Dielectric constant, **6**: 104

Kerosene lamp, temperature, 5: 247**Kerr effect, 6: 435****Kerr's constant, 7: 109****Ketene, absorption spectra, 5: 376****1-Keto-7-methyl-1, 2, 3, 4-tetrahydro-naphthalene****-Quinoline**

- Density, **7**: 87
- Refractive index, **7**: 87
- Dispersion, **7**: 106

Ketones, aliphatic

- X-ray diffraction data, **1**: 348

Kienmayer's amalgam, 2: 378**Kieselguhr. See Diatomaceous earth.****Kieserite**

- Density, **1**: 141
- Refractive index, **1**: 141, 170

Kilbrickenite, density, 1: 116**Kilogram, definition, 1: 1****Kinetics**

- Biochemical, **7**: 153
- Chemical, **7**: 113
- Photochemical, **7**: 159
- Physical
 - Crystallization, **5**: 60
 - Diffusion
 - Gases, **5**: 62
 - Liquids, **5**: 63
 - Solids, **5**: 77
 - Dissolution, **5**: 55
 - Permeability, **5**: 76
 - Vaporization, **5**: 53
 - Radiochemical, **1**: 366

Kingia australis

- Density, **2**: 313
- Thermal conductivity, **2**: 313

Kirchhoff equation, 5: 79**Kiri wood, thermal conductivity, 2: 313****Kleinite, density, 1: 121****Kneiss metal, 2: 378****Kobaltnickelkies, thermal expansion, 3: 44****Kochlin's bearing, 2: 378; cf. 475, 559****Koehlinite, refractive index, 1: 133, 174****Koettigite**

- Density, **1**: 119
- Refractive index, **1**: 119, 172

Kohlswa iron, magnetic properties, 6: 376**Kossel's theory (magnetization), 6: 347****Kraft paper**

- Adsorbed moisture at various humidities, **2**: 316
- Density, **2**: 311
- Dielectric constant, **2**: 310
- Dielectric strength, **2**: 310
- Mica and, thermal conductivity, **2**: 314
- Power factor, **2**: 310
- Tensile strength, **2**: 311

Kreitonite, thermal expansion, 3: 43**Kroehnkite**

- Density, **1**: 152
- Refractive index, **1**: 152, 170

Kromax (alloy), 2: 378; cf. 480, 608**Kromore (alloy), 2: 378; cf. 467, 480**

- Electrical conductivity, **6**: 193

Krugite, density, 1: 158**Krupp alloy, electrical conductivity, 6: 196****Krupp bearing (alloy), 2: 378****Krupp steel, 2: 378**

- Thermal expansion, **2**: 471

Krupp type metal, 2: 378**Kruppin (alloy), 2: 378; cf. 471, 482**

- Electrical conductivity, **6**: 185
- Thermoelectric properties, **6**: 222

Krypton

- Boiling point, **1**: 102; **3**: 203
- Compressibility, gas, **3**: 7
- Critical constants, **1**: 102; **3**: 204, 248
- Critical potentials, **6**: 71
- Decomposition pressure of hydrate, **7**: 231
- Density
 - Gas, **1**: 102; **3**: 3
 - Liquid, **1**: 102; **3**: 20
 - Solid, **1**: 104

* Data for system will be found under this compound in Index. Full explanation on page vii.

Krypton.—(Continued)

- Dispersion formula, 7: 11
- Electrons, absorption of, by, 6: 61
- Emission spectra, 5: 301
- Heat of decomposition of hydrate, 7: 231
- Heat of fusion, 1: 104
- Heat of vaporization, 1: 102
- Ionization by α -particles, 6: 122
- Isotopes, 1: 45
- Light, transmission of, by, 5: 265
- Melting point, 1: 104
- Persistent lines, 5: 323
- Polarization of light scattered by, 5: 265
- Quantum numbers, 5: 408
- Refractivity, 7: 7
- Solubility in water, 3: 256
- Specific heat, gas, 5: 80
- Spectral series, 5: 400
- Thermal expansion, gas, 3: 7
- Triple point, 3: 203
- Vapor pressure, 3: 203, 204
- Viscosity, gas, 1: 102; 5: 2
- X-ray absorption limits, 6: 37
- X-rays, emission efficiency, 6: 11
- Zeeman effect, 5: 420
- Kuhne's phosphor bronze**, 2: 378, 562, 570
- Kunheim metal**, 2: 378

L alloys, 2: 378; *cf.* 467, 534, 537, 539–542, 601

L α doublet, spread of, 6: 30

L M steel, 2: 378; *cf.* 472, 605

Laboratory technique

- Acidimetry and alkalimetry, 1: 81
- Adhesives, 2: 217
- Air, buoyant effect of, 1: 75, 80
- Atmosphere
 - Composition of, 1: 393
 - Conditioning of, 2: 321
 - Density of, 1: 71
- Barometry, 1: 69, 71, 72
- Buffer solutions, 1: 81
- Color filters, 5: 271
- Constant humidity, 1: 67, 3: 385
- Constant temperature, 1: 61, 306, 310
- Density, determination of, 1: 78, 80
- Dielectric measurements, standard liquids, 6: 81
- Electrical conductivity, standard solutions, 6: 230
- Electrolytic E. M. F., standards, 6: 312
- Errors of observation, 1: 92
- Eudiometry, 1: 72
- Fireproofing of fabrics, 2: 239
- Freezing mixtures, 1: 63
- Furnaces, 1: 67; 2: 316
- Gaseous fuels, 2: 166
- Glass, laboratory, 2: 87, 107; 4: 19
- Glue, 2: 217
- Hearing, characteristics of, 1: 94; 6: 450
- High temperature, production of, 1: 67
- Humidity, measurement of, 1: 71
- Hydrogen ion concentration, 1: 81
- Hydrometers, 1: 31, 78
- Illumination sources, 5: 247, 437, 445
- Indicators, 1: 81
- Lamps, characteristics of, 5: 247, 437, 445
- Low temperature, production of, 1: 62
- Lubrication, 2: 164
- Manometry, 1: 68, 72
- Measurement, personal equation in, 1: 92; 2: 325
- Menisci, volume of, 1: 72
- Photometric filters, 5: 264, 435
- Poisons, 2: 318
- Polarimetry, 2: 334
- Porcelains, laboratory, 2: 73
- Pumps, air, 1: 91
- Pyknometers, 1: 78
- Pyrometry, 1: 59

Laboratory technique.—(Continued)

- Radiation filters, 5: 271
- Reaction times, 1: 94
- Saccharimetry, 2: 234
- Senses, characteristics of, 1: 92
- Sieves and screens, 2: 329
- Sound generators, 6: 453
- Spectroscopic standards, 5: 274
- X-rays, 6: 7
- Surface tension, measurement of, 4: 435
- Thermal conductivity, standardizing materials, 5: 218
- Thermocouples, 1: 57
- Thermometry, 1: 52
- Toxicology, 2: 318
- Vacuum
 - High, technic of, 1: 91; 5: 53
 - Reduction of weights to, 1: 74, 80
- Viscometers, 1: 32
 - Calibrating liquids, 5: 10, 22, 23
- Vision, characteristics of, 1: 92
- Volumetric apparatus, calibration, 1: 80
- Weights and weighing, 1: 73, 80

Labradorite

- Compressibility, 3: 50
- Compressive strength, 2: 48

Lacquer, X-rays, refraction of, by, 6: 50

Lactamide

- Boiling point elevation in aqueous solution, 3: 327
- Surface tension, 4: 450
- Acetone*
- Ethyl alcohol*

Lactanilide

- Boiling point elevation in aqueous solution, 3: 327
- Acetone*
- Benzene*
- Chloroform*
- Ethyl alcohol*
- Ethyl ether*

Lactase, 7: 155

Lactic acid

- Absorption spectra, ultra-violet, 5: 379
- Density, aqueous solution, 3: 112, 114; 7: 68
- Dielectric constant, 6: 86
- Diffusion in methyl alcohol, 5: 72
- Electrical conductivity, aqueous solution, 6: 264
- Freezing point lowering of aqueous solution, 4: 262
- Heat of combustion, 5: 165
- Optical rotatory power, 7: 366
- Photochemical decomposition, 7: 165
- Refractive index, aqueous solution, 7: 68
- Specific heat, aqueous solution, 5: 124
- Viscosity
 - Aqueous solution, 5: 21
 - Liquid, 7: 214
- Acetic acid*
- Ammonium dichloroacetate*
- Ammonium formate*
- Ammonium lactate*
- Aniline*
- Boric acid*
- Chloroform*
- Ethyl ether*
- Molybdenum trioxide
 - Density, aqueous solution, 3: 102
 - Refractive index, aqueous solution, 7: 94
- Oxalic acid
 - Freezing point-solubility in water, 4: 401
- Potassium dichloroacetate
 - Density, aqueous solution, 3: 103
- Potassium formate
 - Density, aqueous solution, 3: 103

Lactic acid.—(Continued)

- Potassium lactate
 - Density, aqueous solution, 3: 103
- Sodium dichloroacetate
 - Density, aqueous solution, 3: 103
- Sodium formate
 - Density, aqueous solution, 3: 102
- Sodium lactate
 - Density, aqueous solution, 3: 102
- Lactides**, saponification constants, 7: 135
- Lactones**, saponification, kinetics of, 7: 134
- γ -Lactones**
 - Hydrolysis, dynamics of, 7: 139
- Lactonitrile**
 - Density, 3: 28
 - Dielectric constant, 6: 85
 - Electrical conductivity, 6: 143
 - Refractive index, 7: 35
 - Surface tension, 4: 449
- Acetonitrile*
- Lactose**
 - Absorption spectra, 5: 349
 - Adsorption by charcoal, 3: 251
 - Crystallography, 1: 332
 - Density, aqueous solution, 2: 346; 7: 69
 - Diffusion in water, 5: 71
 - Equilibrium with hydrate, 2: 346
 - Freezing point lowering of aqueous solution, 2: 346; 4: 263
 - Heat of combustion, 5: 166
 - Heat of solution in water, 5: 150
 - Hydrolysis, 2: 346
 - Hydrolysis by enzymes, 7: 155
 - Melting point, 2: 345
 - Mutarotation, 2: 346
 - Optical rotation, 2: 345
 - Pyroelectric effect, 6: 210
 - Refractive index, aqueous solution, 2: 346; 7: 69
 - Solubility in aqueous ethyl alcohol, 4: 405
 - Solubility in water, 2: 346; 4: 253
 - Specific heat, 5: 104
 - Aqueous solution, 5: 125
 - Surface tension, aqueous solution, 4: 470
 - Transition temperatures, 2: 345
 - Verdet constant, 6: 430
 - Viscosity, aqueous solution, 5: 23
- Pyridine
 - Freezing point-solubility in water, 4: 415
- Lactose derivatives**
 - Optical rotatory power, 7: 399
- Lactose octoacetate**
 - Heat of combustion, 5: 167
- Laderig's speculum**, 2: 378; *cf.* 475, 559
- Lafond's bearing**, 2: 378; *cf.* 475, 561
- Lafond's malleable bronze**, 2: 378; *cf.* 559
- Lafond's pump bronze**, 2: 378; *cf.* 565, 572
- Lambert**, definition, 1: 38
- Lambert's law**, 1: 38
- Lampblack**
 - Albedo, 5: 263
 - Contact potential, 6: 57
 - Emission, spectral, 5: 244
 - Moisture content at various humidities, 2: 316
 - Photoelectric threshold, 6: 68
 - Rubber, use in, 2: 286
 - Thermal conductivity under reduced pressures, 2: 315
- Lamps**
 - Luminous efficiency, 5: 437
 - Mercury vapor, 7: 160
 - Photographic efficiency, 5: 445
- Lanarkite**
 - Density, 1: 115
 - Melting point, 1: 115
 - Refractive index, 1: 115, 173
- Lancashire brass**, 2: 378; *cf.* 469
- Landé's splitting factor**, 5: 420

* Data for system will be found under this compound in Index. Full explanation on page vii.

Langbeinite

Density, 1: 158
Refractive index, 1: 158, 165

Langevin's theory (magnetization), 6: 347, 350**Langite**

Density, 1: 122
Refractive index, 1: 122, 173

Lansfordite

Density, 1: 141
Refractive index, 1: 141, 168

Lanthanum

Boiling point, 1: 102
Cathodoluminescence, 5: 390
Density, 1: 104; 2: 456
Electrical conductivity, 1: 104; 6: 153
Electrons, thermal emission of, 6: 53
Emission spectra, 5: 302
Hardness, 2: 592
Isotopes, 1: 45
Magnetic susceptibility, 6: 355
Melting point, 1: 104
Persistent lines, 5: 323
Quantum numbers, 5: 408
Specific heat, 1: 104; 5: 93
Spectral series, 5: 400
Thermionic work function, 6: 53
Thermochemistry, 5: 194
X-ray absorption limits, 6: 39
X-ray emission spectra, 6: 39
X-ray series, limiting frequencies, 6: 35
Zeeman effect, 5: 420
-Carbon*

Lanthanum acetate

Solubility in water, 4: 227

Lanthanum bromate

Solubility in water, 4: 228

Lanthanum chloride

Absorption spectra, solutions, 5: 327
Electrical conductivity, 6: 148
Aqueous solution, 6: 233
Freezing point lowering of aqueous solution, 4: 257
Heat of formation, 5: 194
Magnetic susceptibility, 6: 359
-Ethyl alcohol*

Lanthanum disulfide

Heat of formation, 5: 194

Lanthanum ethyl sulfate

Density, 1: 138
Refractive index, 1: 138, 166

Lanthanum hydride

Heat of formation, 5: 194

Lanthanum hydroxybenzoate (*m*-, *p*-)

Electrical conductivity, aqueous solution, 6: 245

Lanthanum iodate

Density, aqueous solution, 3: 105
Electrical conductivity, aqueous solution, 6: 245, 258
Solubility in water, 4: 227
-Diammonium lanthanum nitrate*
-Lanthanum nitrate
Density, aqueous solution, 3: 98
Solubility in water, 7: 338
-Potassium iodate
Density, aqueous solution, 3: 98
Freezing point-solubility in water, 4: 321; 7: 338
-Sodium iodate
Density, aqueous solution, 3: 98
Freezing point-solubility in water, 4: 320; 7: 338
-Sodium nitrate
Density, aqueous solution, 3: 98
Freezing point-solubility in water, 4: 320; 7: 338

Lanthanum malonate

Solubility in aqueous solutions, 7: 339

Lanthanum molybdate

Specific heat, 5: 98

Lanthanum molybdate.—(Continued)**-Lead molybdate**

Freezing point-solubility, 4: 53

Lanthanum nitrate

Absorption spectra, solutions, 5: 327
Dehydration behavior of hydrate, 7: 289
Density, aqueous solution, 3: 71
Electrical conductivity, aqueous solution, 6: 238, 240
Freezing point lowering of aqueous solution, 4: 257
Solubility in water, 4: 227
Specific heat, aqueous solution, 5: 123
-Lanthanum iodate*
-Lanthanum oxalate
Freezing point-solubility in water, 4: 359
-Sodium iodate
Freezing point-solubility in water, 4: 320
-Thallium monochloride
Solubility in water, 7: 320

Lanthanum oxalate

Dehydration behavior of hydrate, 7: 290
Electrical conductivity, aqueous solution, 6: 258
Solubility in aqueous solutions, 7: 339
-Lanthanum nitrate*
-Lanthanum sulfate-Oxalic acid-Sulfuric acid
Density, aqueous solution, 3: 103
Lanthanum sulfate-Sulfuric acid
Density, aqueous solution, 3: 100
-Oxalic acid-Sulfuric acid
Density, aqueous solution, 3: 103
-Sulfuric acid
Freezing point-solubility in water, 4: 335

Lanthanum salicylate, electrical conductivity, aqueous solution, 6: 245**Lanthanum sesquioxide**

Electrons, thermal emission of, 6: 54
Heat of formation, 5: 194
Magnetic susceptibility, 6: 359
Melting point, 4: 84
Specific heat, 5: 98
Thermionic work function, 6: 54

Lanthanum sulfate

Decomposition pressure, 7: 289
Dehydration behavior of hydrate, 7: 290
Density, aqueous solution, 3: 71
Electrical conductivity, aqueous solution, 6: 236
Freezing point lowering of aqueous solution, 4: 257
Heat of formation, 5: 194
Magnetic susceptibility, 6: 359
Solubility in aqueous solutions, 7: 339
Solubility in water, 4: 227
-Ammonium sulfate*
-Lanthanum oxalate*-Oxalic acid-Sulfuric acid
-Lanthanum oxalate*-Sulfuric acid
-Oxalic acid-Sulfuric acid
Density, aqueous solution, 3: 103
-Potassium sulfate
Freezing point-solubility in water, 4: 348
-Sodium sulfate
Freezing point-solubility in water, 4: 348
-Sulfuric acid
Freezing point-solubility in water, 4: 348; 7: 339
-Thallium monochloride
Solubility in water, 7: 320
Lanthanum sulfide, heat of formation, 5: 194

Lanthanum tartrate

Electrical conductivity, aqueous solution, 6: 258
Solubility in aqueous solutions, 7: 339
Laplace equation, 5: 79
Laplace-Poisson equation, 4: 434
Lard oil, ignition temperature, 2: 151
Laserpitin, optical rotatory power, 7: 464
Latent heat, definition, 1: 37

Latex

Acetic acid, effect of, 2: 256
Alum, effect of, 2: 257
Ammonia, effect of, 2: 256
Ammoniated, 2: 255
Chemical composition, 2: 255
Coagulation, 2: 256
Density, 2: 255
Formic acid, effect of, 2: 257
Hydrochloric acid, effect of, 2: 257
Hydrogen ion concentration, 2: 255
Nitric acid, effect of, 2: 257
Oxidases, 2: 255
Preservation, 2: 256
Rubber content, 2: 255
Sodium hydroxide, effect of, 2: 256
Sulfuric acid, effect of, 2: 257
Surface tension, 2: 255
Viscosity, 2: 255
Vulcanization, 2: 256

Latitude

Celestial, 1: 35
Definition, 1: 38, 393
Latten (alloy), 2: 378
Latvia, weights and measures, 1: 9

Laubanite

Density, 1: 145
Refractive index, 1: 145, 166

Laumontite

Dehydration behavior, 7: 313
Density, 1: 145
Refractive index, 1: 145, 169

Lauric acid

Absorption spectra, 5: 349
Cryoscopic constant, 4: 184
Density, 3: 45
Esterification constant, 7: 138
Heat of combustion, 5: 166
Heat of fusion, 5: 134
Melting point under pressure, 4: 10
Specific heat
Liquid, 5: 113
Solid, 5: 104
Vapor pressure, 3: 227
Viscosity, 7: 221
-Benzene*
-Carbon tetrachloride*
-Ethyl acetate*
-Ethyl alcohol*
-Methyl alcohol
Heat of solution, 5: 152
-Myristic acid
Freezing point-solubility, 4: 161
-Palmitic acid
Density, 3: 195
Freezing point-solubility, 4: 161
-Propyl alcohol
Heat of solution, 5: 153
-Stearic acid
Density, 3: 195
Freezing point-solubility, 4: 162
-Toluene
Heat of solution, 5: 154

Laurionite

Decomposition point, 1: 115
Density, 1: 115
Refractive index, 1: 115, 173

Laurite, density, 1: 126**Laurolene**, heat of combustion, 5: 163**Laurolic acid**, electrical conductivity, aqueous solution, 6: 292**Lautal** (alloy), 2: 378

* Data for system will be found under this compound in Index. Full explanation on page vii.

Lautarite. See Calcium iodate.

Lava

- Compressive strength, **2**: 48, 311
- Density, **2**: 311
- Dielectric strength, **2**: 310
- Thermal conductivity, **2**: 55, 311
- See also Lavite.

Lavite

- Density, **2**: 311
- Dielectric strength, **2**: 310
- Electrical conductivity, **2**: 310
- Strength properties, **2**: 311

Lawrencite

- Density, **1**: 128
- Refractive index, **1**: 128, 166
- See also Ferrous chloride.

Law's phosphor bronze, **2**: 378; cf. 560, 565, 570-572

Lawsonite

- Density, **1**: 145
- Refractive index, **1**: 145, 172

Lazulite

- Density, **1**: 142
- Refractive index, **1**: 142, 171

Lazurite

- Density, **1**: 153
- Refractive index, **1**: 153, 165

Lead

- Absorption, index of, **5**: 250
- Acoustic resistivity, **6**: 459
- Boiling point, **1**: 102; **3**: 205
- Cathodoluminescence, **5**: 390
- Compressibility, **3**: 47, 48
- Compton effect, **6**: 18
- Contact potential, **6**: 57
- Critical potentials, **6**: 71
- Density
 - Liquid, **1**: 102; **2**: 457, 463
 - Solid, **1**: 104; **2**: 456
- Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 104; **6**: 136, 137, 140
 - Low temperature, **6**: 128, 133
 - Magnetic field, effect of, **6**: 422
- Electrode potential, **6**: 320, 332; **7**: 248
- Electrons, secondary emission of, **6**: 63
- Electrons, transmitted, velocity of, **6**: 62
- Electrons excited by X-rays, number of, **6**: 5
- Electrons freed by X-rays, energy of, **6**: 4
- Emission, spectral, **5**: 255
- Emission spectra, **5**: 309
- Entropy, **5**: 89
- Fluorescence of vapors, **5**: 391
- Free energy, **7**: 248
 - Amalgamation, **7**: 248
 - Electrode reaction, **7**: 248
 - Reaction with water, **7**: 248
 - Vaporization, **7**: 248
- Gamma rays, absorption coefficient, **6**: 14, 20, 21
- Gold, diffusion of, in, **5**: 75
- Hall effect, **6**: 416, 417
- Heat content, **5**: 89
- Heat of fusion, **1**: 104; **2**: 458
- Heat of vaporization, **1**: 102
- Interfacial tension against fused salts, **4**: 439
- Magnetic susceptibility, **6**: 355
- Magneton number, **6**: 346
- Mechanical properties, **2**: 556
- Melting point, **1**: 53, 104
- Nernst effect, **6**: 420
- Oxidized, emission, spectral, **5**: 244
- Persistent lines, **5**: 323
- Photoelectric threshold, **6**: 68
- Platinum, diffusion of, in, **5**: 75
- Quantum numbers, **6**: 408
- Refractive index, **1**: 103; **5**: 250
- Rhodium, diffusion of, in, **5**: 75

Lead.—(Continued)

- Sound, velocity of, in, **6**: 459, 465
- Specific heat
 - Gas, **7**: 248
 - Liquid, **5**: 94; **7**: 248
 - Solid, **1**: 104; **5**: 85, 89, 93; **7**: 248
- Spectral series, **5**: 403
- Surface tension, **1**: 103; **4**: 440
- Thermal conductivity, **5**: 218, 220, 221
- Thermal expansion
 - Liquid, **1**: 102; **2**: 463
 - Solid, **1**: 104; **2**: 461
- Thermochemistry, **5**: 183
- Thermodynamic potential, **5**: 89
- Thermoelectric properties, **6**: 214, 225
- Thomson coefficient, **6**: 228
- Thorium-B, diffusion of, in, **5**: 75
- Tin ion, reaction with, **7**: 248
- Vapor pressure, **3**: 205
- Viscosity, liquid, **5**: 7
- Volume change on fusion, **2**: 474
- Volume change on solidification, **2**: 475
- X-ray absorption limits, **6**: 42
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 42
- X-ray series
 - Absorption, discontinuity in, **6**: 12
 - Absorption coefficient, **6**: 13-15
 - Limiting frequencies, **6**: 35
 - Scattering, modification by, **6**: 17
 - Scattering coefficient, **6**: 17
- Zeeman effect, **5**: 420, 425
- Aluminum*
- Aluminum*-Antimony
- Aluminum*-Silver
- Aluminum*-Tin
- Aluminum*-Zinc
- Antimony*
- Antimony*-Copper
- Antimony*-Copper-Tin
- Antimony*-Copper-Tin-Zinc
- Antimony*-Tin
- Antimony*-Zinc
- Arsenic*
- Arsenic*-Copper-Tin-Zinc
- Barium*-Calcium
- Bismuth*
- Bismuth*-Cadmium-Tin
- Bismuth*-Mercury
- Bismuth*-Tin
- Cadmium*
- Cadmium*-Tin
- Cadmium*-Zinc
- Calcium*
- Chromium*
- Cobalt*
- Copper*
- Copper*-Iron-Tin-Zinc
- Copper*-Tin
- Copper*-Tin-Zinc
- Copper*-Zinc
- Gold*
- Indium*
- Iron*
- Lead chloride
 - Freezing point-solubility, **4**: 40
- Lead dioxide
 - Reaction in sulfuric acid, **7**: 249
- Magnesium
 - Electrical conductivity, **6**: 192
 - Equilibrium diagram, **2**: 415
 - X-ray diffraction data, **1**: 344, 349
- Manganese
 - Equilibrium diagram, **2**: 415
- Mercury
 - Density, **2**: 589
 - Electrical conductivity, **6**: 190
 - Equilibrium diagram, **2**: 414
 - Hardness, **2**: 586
 - Specific heat, **5**: 119
 - Specific volume, **2**: 589

Lead.—(Continued)

- Surface tension, **2**: 591
- Thermal expansion, **2**: 474
- Thermoelectric properties, **6**: 220
- Vapor pressure, partial, **3**: 284
- Viscosity, liquid, **5**: 7
- X-ray diffraction data, **1**: 348
- Palladium
 - Density, **2**: 589
 - Equilibrium diagram, **2**: 415
- Platinum
 - Density, **2**: 589
 - Equilibrium diagram, **2**: 415
 - Thermal conductivity, **5**: 226
- Potassium
 - Electrical conductivity, **6**: 198
 - Equilibrium diagram, **2**: 415
- Selenium
 - Freezing point-solubility, **4**: 27
- Silver
 - Density, **2**: 589
 - Electrical conductivity, **6**: 161
 - Equilibrium diagram, **2**: 414
 - Specific volume, **2**: 589
 - Thermal conductivity, **5**: 222
- Silver-Zinc
 - Equilibrium diagram, **2**: 418
 - Miscibility relations, **3**: 408
- Silver bromide
 - Electrode potential, **7**: 267
- Silver chloride
 - Electrode potential, **7**: 266
- Silver iodide
 - Electrode potential, **7**: 268
- Sodium
 - Electrical conductivity, **6**: 198
 - Equilibrium diagram, **2**: 415
- Sulfur
 - Freezing point-solubility, **4**: 25
- Sulfur dioxide
 - Free energy and heat of reaction, **7**: 250
 - Freezing point-solubility, **4**: 40
- Tellurium
 - Equilibrium diagram, **2**: 416
 - Freezing point-solubility, **4**: 28
- Thallium
 - Electrical conductivity, **6**: 194
 - Equilibrium diagram, **2**: 416
 - Magnetic susceptibility, **6**: 365
 - Specific heat, **5**: 121
 - Thermal conductivity, **5**: 225
 - Thermoelectric properties, **6**: 221
- Tin
 - Absorption, index of, **5**: 251
 - Electrical conductivity, **6**: 194, 199
 - Equilibrium diagram, **2**: 415
 - Magnetic susceptibility, **6**: 365
 - Mechanical properties, **2**: 557
 - Refraction, index of, **5**: 251
 - Specific heat, **5**: 121
 - Surface tension, **4**: 440
 - Thermal conductivity, **5**: 225
 - Thermal expansion, **2**: 467, 474
 - Thermoelectric properties, **6**: 221
 - Viscosity, liquid, **5**: 10
 - Volume change on solidification, **2**: 475
 - X-ray diffraction data, **1**: 348
- Tin-Zinc
 - Miscibility relations, **3**: 408
- Zinc
 - Compressibility, **2**: 548
 - Electrical conductivity, **6**: 199
 - Equilibrium diagram, **2**: 416
 - Thermoelectric properties, **6**: 221
- Lead acetate**
 - Boiling point elevation in aqueous solution, **3**: 325
 - Concentration cell, **6**: 324
 - Crystallography, **1**: 320

Lead acetate.—(Continued)

- Decomposition pressure of hydrates, 7: 250
- Density, 1: 117
- Aqueous solution, 3: 63, 104
- Electrical conductivity, aqueous solution, 6: 243, 254
- Freezing point lowering of aqueous solution, 4: 255
- Heat of formation, 5: 184
- Melting point, 1: 117
- Refractive index, 1: 117, 170
- Aqueous solution, 7: 70
- Dispersion, 7: 100
- Solubility in water, 4: 220
- Specific heat, aqueous solution, 5: 122
- Surface tension, aqueous solution, 4: 464
- Vapor pressure lowering in aqueous solution, 3: 294
- Viscosity, aqueous solution, 5: 13
- Acetic acid*
- Ammonium sulfate*
- Ethyl alcohol*
- Lead hydroxide
- Freezing point-solubility in water, 4: 374
- Lead oxide
- Density, aqueous solution, 3: 97
- Potassium acetate
- Freezing point-solubility in water, 4: 374
- Potassium sulfate
- Freezing point-solubility in water, 4: 336
- Silver acetate
- Solubility in water, 7: 323
- Sodium azide
- Freezing point-solubility in water, 4: 356
- Sodium nitrate
- Density, aqueous solution, 3: 97
- Sodium sulfate
- Freezing point-solubility in water, 4: 336

Lead amalgams

- Mercurous chloride
- Electromotive force, 7: 259
- Mercurous iodide
- Electromotive force, 7: 260
- Mercurous sulfate
- Electromotive force and free energy, 7: 260
- Silver bromide
- Electrode potential, 7: 267
- Silver chloride
- Electrode potential, 7: 266
- Silver iodide
- Electromotive force, 7: 268
- See also Lead-Mercury.

Lead arsenate

- Specific heat, 5: 96
- Lead chloride
- Freezing point-solubility, 4: 51
- Lead fluoride
- Freezing point-solubility, 4: 50
- Lead phosphate
- Freezing point-solubility, 4: 52
- Lead vanadate
- Freezing point-solubility, 4: 52

Lead azide

- Explosive, properties as, 7: 490
- Heat of explosion, 7: 490
- Solubility in water, 4: 220
- Sodium acetate
- Freezing point-solubility in water, 4: 356
- Sodium nitrate
- Freezing point-solubility in water, 4: 356

Lead benzoate

- Electrical conductivity, aqueous solution, 6: 243
- Solubility in water, 4: 220
- Lead borate, specific heat, 5: 98
- Lead bromate, electrical conductivity, aqueous solution, 6: 258
- Lead bromide
- Ammines
- Decomposition pressure, 7: 249
- Heat of decomposition, 7: 249
- Heat of formation, 5: 183
- Density, 3: 23, 43
- Aqueous solution, 3: 104
- Dielectric constant, 6: 76
- Electrical conductivity, 6: 148
- Aqueous solution, 6: 258
- Electrode potential, 7: 249
- Free energy, 7: 249
- Heat of formation, 5: 183
- Heat of fusion, 5: 131
- Magnetic susceptibility, 6: 357
- Photoelectric current, 6: 69
- Solubility in water, 4: 220
- Solution velocity in water, 5: 56
- Specific heat
- Liquid, 5: 106
- Solid, 5: 96
- Thermal conductivity, 5: 217
- Vapor pressure, 3: 214
- Viscosity, 7: 212
- Aluminum bromide*
- Barium bromide*
- Barium chloride*
- Barium nitrate*
- Bismuth bromide*
- Cadmium bromide*
- Calcium bromide*
- Calcium chloride*
- Hydrogen bromide*
- Lead chloride
- Electrical conductivity, 6: 150
- Freezing point-solubility, 4: 50
- Freezing point-solubility in water, 4: 274, 382
- Lead chloride-Lead iodide
- Freezing point-solubility, 4: 75, 80
- Lead fluoride
- Freezing point-solubility, 4: 50
- Lead iodide
- Freezing point-solubility, 4: 51
- Lead nitrate
- Solubility in water, 7: 317
- Lead oxide
- Freezing point-solubility, 4: 50
- Mercuric bromide
- Freezing point-solubility, 4: 51
- Nitric acid
- Solubility in water, 7: 317
- Potassium bromide
- Freezing point-solubility in water, 4: 318; 7: 317
- Potassium chloride
- Freezing point-solubility in water, 4: 275
- Pyridine
- Freezing point-solubility, 4: 198
- Silver bromide
- Freezing point-solubility, 4: 51
- Sodium bromide
- Freezing point-solubility in water, 4: 318; 7: 317
- Sodium carbonate
- Solubility in water, 7: 250
- Sodium chloride
- Freezing point-solubility in water, 4: 275
- Strontium bromide
- Freezing point-solubility in water, 4: 317; 7: 317

Lead bromide.—(Continued)

- Strontium chloride
- Freezing point-solubility in water, 4: 275
- Lead carbonate
- Compressibility, 3: 50
- Dielectric constant, 6: 76
- Electrical conductivity, aqueous solution, 6: 258
- Free energy, 7: 250
- Decomposition, 7: 250
- Heat of decomposition, 7: 250
- Heat of formation, 5: 183
- Precipitation, equilibrium relations, 7: 250
- Reflectivity, selective, 5: 260
- Refractive index, 7: 20
- Specific heat, 5: 96; 7: 250
- See also Cerussite.
- Potassium chromate
- Freezing point-solubility in water, 4: 371
- Lead carbonate (basic)
- Carbon dioxide, reaction with, 7: 250
- Free energy, 7: 250
- Hydroxide ion, reaction with, 7: 250
- Lead chlorate
- Density, aqueous solution, 3: 63, 104
- Solubility in water, 4: 219
- Lead chloride
- Ammines
- Decomposition pressure, 7: 248
- Heat of decomposition, 7: 248
- Heat of formation, 5: 183
- Boiling point, 1: 115, 163
- Compressibility, 3: 50
- Concentration cell, 6: 324
- Density
- Aqueous solution, 3: 63, 104
- Liquid, 3: 23
- Solid, 3: 43
- Dielectric constant, 6: 76, 100
- Electrical conductivity, 6: 148
- Aqueous solution, 6: 232, 258
- Electrode potential, 7: 248
- Emission, spectral, 5: 259
- Entropy, 5: 90
- Free energy, 7: 248
- Hydrolysis, 7: 248
- Heat content, 5: 90
- Heat of formation, 5: 183
- Heat of fusion, 5: 131
- Magnetic susceptibility, 6: 357
- Melting point, 1: 115
- Photoelectric current, 6: 69
- Refractive index, 7: 20
- Residual rays, 5: 261
- Solubility in water, 4: 219
- Solution velocity in water, 5: 56
- Specific heat
- Liquid, 5: 106
- Solid, 5: 90, 96
- Surface tension, 4: 442
- Thermal conductivity, 5: 217
- Thermodynamic potential, 5: 90
- Vapor pressure
- Liquid, 3: 214
- Solid, 3: 207
- Viscosity, 7: 212
- See also Cotunnite.
- Acetic acid*
- Ammonium chloride*
- Barium bromide*
- Barium chloride*
- Beryllium chloride*
- Bismuth chloride*
- Cadmium chloride*
- Calcium bromide*
- Calcium chloride*
- Cuprous chloride*
- Ethyl alcohol*
- Ferric chloride*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Lead chloride.—(Continued)

- Hydrogen chloride*
- Lead*
- Lead arsenate*
- Lead bromide*
- Lead bromide*-Lead iodide
- Lead fluoride
 - Freezing point-solubility, 4: 50
- Lead iodide
 - Freezing point-solubility, 4: 50
- Lead nitrate
 - Density, aqueous solution, 3: 97
 - Solubility in water, 7: 315
- Lead oxide
 - Freezing point-solubility, 4: 49
- Lead phosphate
 - Freezing point-solubility, 4: 50
- Lead sulfide
 - Freezing point-solubility, 4: 50
- Lead vanadate
 - Freezing point-solubility, 4: 51
- Lithium chloride
 - Freezing point-solubility, 4: 51
 - Solubility in water, 7: 316
- Magnesium chloride
 - Freezing point-solubility, 4: 51
 - Solubility in water, 7: 315
- Manganese chloride
 - Freezing point-solubility, 4: 51
 - Solubility in water, 7: 315
- Mannitol
 - Freezing point-solubility in water, 4: 417; 7: 315
- Mercuric chloride
 - Solubility in water, 7: 315
- Nitric acid
 - Solubility in water, 7: 314
- Potassium bromide
 - Freezing point-solubility in water, 4: 275
- Potassium chloride
 - Freezing point-solubility, 4: 51
 - Freezing point-solubility in water, 4: 304, 385; 7: 316
- Potassium chloride-Sodium chloride
 - Freezing point-solubility, 4: 75, 80
- Pyridine
 - Density, 3: 138
 - Freezing point-solubility, 4: 198
- Rubidium chloride
 - Freezing point-solubility, 4: 51
- Silver chloride
 - Freezing point-solubility, 4: 51
- Sodium bromide
 - Freezing point-solubility in water, 4: 275
- Sodium carbonate
 - Solubility in water, 7: 250
- Sodium chloride
 - Freezing point-solubility, 4: 51
 - Freezing point-solubility in water, 4: 304; 7: 316
- Sodium iodide
 - Freezing point-solubility in water, 4: 275
- Stannous chloride
 - Electrical conductivity, 6: 150
 - Freezing point-solubility, 4: 49
- Strontium bromide
 - Freezing point-solubility in water, 4: 275; 7: 316
- Strontium chloride
 - Freezing point-solubility, 4: 51
 - Freezing point-solubility in water, 4: 304; 7: 315
- Thallium monochloride
 - Freezing point-solubility, 4: 51
- Zinc chloride
 - Density, 3: 134
 - Freezing point-solubility, 4: 51
 - Solubility in water, 7: 315

Lead chloride cell, 6: 315

Lead chlorite, solubility in water, 4: 219

Lead chromate

- Heat of formation, 5: 193
- Ionization constant, 7: 287
- Reflectivity, selective, 5: 260
- Specific heat, 5: 98
- Transition temperature, 4: 7
- Hydrogen chloride*
- Lead molybdate
 - Freezing point-solubility, 4: 52
- Lead oxide
 - Freezing point-solubility, 4: 50
- Lead sulfate
 - Freezing point-solubility, 4: 52, 78
- Lead tungstate
 - Freezing point-solubility, 4: 52
- Nitric acid
 - Solubility in water, 7: 336
- Potassium carbonate
 - Freezing point-solubility in water, 4: 371

Lead dihydroarsenate

- Density, 1: 116
- Refractive index, 1: 116, 173

Lead dioxide

- Electrical conductivity, 6: 148, 153
- Free energy, 7: 248
- Heat of formation, 5: 183
- Hydrogen, reduction with, electromotive force, 7: 250
- Photoelectric current, 6: 69
- Specific heat, 5: 96
- X-ray diffraction data, 1: 342
- See also Plattnerite.
- Hydrogen chloride*
- Lead*
- Manganese dioxide
 - Electrical conductivity, 6: 150

Lead dithionate

- Density, 1: 115
- Heat of formation, 5: 183
- Optical rotatory power, 7: 353
- Refractive index, 1: 115, 167; 7: 20
- Strontium dithionate
 - Density, aqueous solution, 3: 97

Lead fluoride

- Dielectric constant, 6: 76
- Electrical conductivity, aqueous solution, 6: 258
- Heat of formation, 5: 183
- Magnetic susceptibility, 6: 357
- Specific heat, 5: 96
- Thermal conductivity, 5: 217
- Vapor pressure, 3: 214
- X-ray diffraction data, 1: 342
- Hydrogen fluoride*-Potassium fluoride
- Hydrogen fluoride*-Sodium fluoride
- Lead arsenate*
- Lead bromide*
- Lead chloride*
 - Freezing point-solubility, 4: 50
- Lead iodide
 - Freezing point-solubility, 4: 49
- Lead phosphate
 - Freezing point-solubility, 4: 50
- Lead vanadate
 - Freezing point-solubility, 4: 50
- Sodium fluoride
 - Freezing point-solubility, 4: 50

Lead fluorochloride

Solubility in water, 4: 220

Lead formate

- Crystallography, 1: 320
- Density, 1: 116
- Dielectric constant, 6: 76
- Heat of formation, 5: 184
- Optical rotatory power, 7: 353
- Refractive index, 1: 116, 173; 7: 20

Lead formate.—(Continued)

-Barium formate*

-Formic acid*

Lead hydrogen arsenate

- Density, 1: 116
- Refractive index, 1: 116, 174

Lead hydrogen phosphite

Heat of formation, 5: 183

Lead hydroxide

- Electrical conductivity, aqueous solution, 6: 258
- Free energy in water, 7: 248
- Free energy of ions, 7: 248
- Heat of formation, 5: 183
- Ionization constant, 7: 248
- Chromic acid*
- Lead acetate*
- Sodium hydroxide
 - Freezing point-solubility in water, 4: 377

Lead iodate

- Electrical conductivity, aqueous solution, 6: 258
- Free energy of ionization, 7: 249
- Solubility in water, 4: 220
- Lead nitrate
 - Freezing point-solubility in water, 4: 320; 7: 318
- Potassium iodate
 - Freezing point-solubility in water, 4: 320; 7: 318
- Potassium nitrate
 - Solubility in water, 7: 318

Lead iodide

Ammines

- Decomposition pressure, 7: 249
- Heat of decomposition, 7: 249
- Heat of formation, 5: 183
- Density, 3: 23
- Aqueous solution, 3: 104
- Dielectric constant, 6: 76
- Electrical conductivity, aqueous solution, 6: 258
- Electrode potential, 7: 249
- Free energy, 7: 249
- Heat of formation, 5: 183
- Heat of fusion, 5: 131
- Magnetic susceptibility, 6: 357
- Photoconductivity, 6: 66
- Photoelectric current, 6: 69
- Solubility in water, 4: 220; 7: 317
- Specific heat, 5: 87, 96
- Thermal conductivity, 5: 217
- Thermal expansion, 3: 44
- Ammonium iodide*
- Cupric nitrate*
- Cupric nitrate*-Iodine-Lead nitrate
- Iodine*
- Iodine*-Lead nitrate
- Lead bromide*
- Lead bromide*-Lead chloride
- Lead chloride*
- Lead fluoride*
- Mercuric iodide
 - Freezing point-solubility, 4: 51
- Nitric acid
 - Solubility in water, 7: 318
- Potassium iodide
 - Freezing point-solubility in water, 4: 319; 7: 318
- Pyridine
 - Freezing point-solubility, 4: 198
- Silver iodide
 - Freezing point-solubility, 4: 52
- Sodium chloride
 - Freezing point-solubility in water, 4: 275
- Sodium sulfate
 - Solubility in water, 7: 249

Lead lignocerate

-Ethyl ether*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Lead malate, solubility in water, **4**: 220
Lead-mercury cell, **6**: 315
Lead metaborate, Verdet constant, **6**: 426
Lead metasilicate
 Melting point, **4**: 84
 Specific heat, **5**: 96
See also Alamosite.
Lead molybdate
 Specific heat, **5**: 98
 X-ray diffraction data, **1**: 343
See also Wulfenite.
 -*Bismuth molybdate**
 -*Cerous molybdate**
 -*Lanthanum molybdate**
 -*Lead chromate**
 -*Lead oxide*
 Freezing point-solubility, **4**: 50
 -*Lead sulfate*
 Freezing point-solubility, **4**: 52
 -*Lead tungstate*
 Freezing point-solubility, **4**: 52
 -*Neodymium molybdate*
 Freezing point-solubility, **4**: 53
 -*Praseodymium molybdate*
 Freezing point-solubility, **4**: 53
 -*Yttrium molybdate*
 Freezing point-solubility, **4**: 52
Lead nitrate
 Absorption spectra, solutions, **5**: 328
 Boiling point elevation in aqueous solutions, **3**: 325
 Concentration cells, **6**: 324
 Density, **1**: 115
 Aqueous solution, **3**: 63, 104, 107
 Dielectric constant, **6**: 76, 99
 Aqueous solution, **6**: 104
 Diffusion in water, **5**: 65
 Electrical conductivity, aqueous solution, **6**: 231, 237, 240
 Emission, spectral, **5**: 259
 Freezing point lowering of aqueous solution, **4**: 255
 Heat of formation, **5**: 183
 Magnetic susceptibility, **6**: 357
 Melting point, **1**: 115
 Reflectivity, selective, **5**: 260
 Refractive index, **1**: 115, 165; **7**: 13
 Aqueous solution, **7**: 70
 Dispersion, **7**: 100
 Solubility in water, **4**: 220
 Specific heat, **5**: 96
 Aqueous solution, **5**: 122
 Surface tension, aqueous solution, **4**: 464
 Thermal conductivity, aqueous solution, **5**: 229
 Transference number, **6**: 310
 Vapor pressure lowering in aqueous solution, **3**: 294
 Viscosity, aqueous solution, **5**: 13
 X-ray diffraction data, **1**: 342
 X-rays, absorption coefficient, **6**: 13
 -*Ammonium nitrate**
 -*Barium nitrate**
 -*Barium nitrate**-*Potassium nitrate*
 -*Cupric nitrate**
 -*Cupric nitrate**-*Iodine-Lead iodide*
 -*Iodine**
 -*Iodine**-*Lead iodide*
 -*Lead bromide**
 -*Lead chloride**
 -*Lead iodate**
 -*Nitric acid*
 Density, aqueous solution, **3**: 96
 -*Potassium iodate*
 Freezing point-solubility in water, **4**: 320
 -*Potassium nitrate*
 Density, aqueous solution, **3**: 97
 Freezing point-solubility, **4**: 52

-*Potassium nitrate*.—(Continued)
 Freezing point-solubility in water, **4**: 361
 Viscosity, aqueous solution, **5**: 19
 -*Potassium nitrate-Sodium nitrate*
 Freezing point-solubility, **4**: 75
 -*Pyridine*
 Boiling point elevation, **3**: 342
 Freezing point-solubility, **4**: 198
 -*Sodium azide*
 Freezing point-solubility in water, **4**: 356
 -*Sodium nitrate*
 Density, aqueous solution, **3**: 97
 Freezing point-solubility, **4**: 52
 Freezing point-solubility in water, **4**: 361, 392
 Viscosity, aqueous solution, **5**: 19
 -*Strontium nitrate*
 Boiling point elevation in aqueous solution, **3**: 347
 Density, aqueous solution, **3**: 97
 Thermal conductivity, aqueous solution, **5**: 229
Lead nitride, heat of formation, **5**: 183
Lead oleate
 Dielectric constant, **6**: 97
 Ethyl ether*
Lead orthophosphate
 Melting point, **1**: 115
 Refractive index, **1**: 115, 167
 Transition point, **1**: 115
Lead orthosilicate, melting point, **4**: 84
See also Barysilite.
Lead oxalate
 Electrical conductivity, aqueous solution, **6**: 258
 Heat of formation, **5**: 184
Lead oxide
 Albedo, **5**: 263
 Dielectric constant, **6**: 76
 Electrical conductivity, **6**: 153
 Entropy, **5**: 90
 Free energy, **7**: 248
 Allotropic transformation, **7**: 248
 Hydrate, **7**: 248
 Reaction with hydrogen, **7**: 248
 Heat content, **5**: 90
 Heat of formation, **5**: 183
 Magnetic susceptibility, **6**: 357
 Melting point, **4**: 84
 Photoelectric current, **6**: 69
 Specific heat, **5**: 90, 96; **7**: 248
 Thermal conductivity, **5**: 217
 Thermodynamic potential, **5**: 90
 Thermoelectric power, **6**: 224
 Transition temperature, **4**: 7
 X-ray diffraction data, **1**: 342
See also Litharge, Massicotite.
 -*Acetic acid**
 -*Arsenic pentoxide**
 -*Bismuth trioxide**
 -*Boric oxide**
 -*Carbon dioxide**
 -*Cupric oxide**
 -*Ferric oxide**
 -*Lead acetate**
 -*Lead bromide*
 -*Lead chloride**
 -*Lead chromate**
 -*Lead fluoride**
 -*Lead molybdate**
 -*Lead sulfate*
 Freezing point-solubility, **4**: 50
 -*Lead tungstate*
 Freezing point-solubility, **4**: 50
 -*Phosphoric acid*
 Freezing point-solubility in water, **4**: 369
 -*Phosphorus pentoxide*
 Freezing point-solubility, **4**: 45

Lead oxide.—(Continued)
 -*Sea salt*
 Freezing point-solubility, **4**: 76
 -*Silica*
 Freezing point-solubility, **4**: 85, 86
 Melting point diagram, **2**: 97
 -*Vanadium pentoxide*
 Freezing point-solubility, **4**: 50
Lead oxybromides
 Heat of formation, **5**: 183
Lead oxycarbonate, free energy, **7**: 250
Lead oxychlorides
 Heat of formation, **5**: 183
Lead oxysulfate
 Free energy, reaction with sulfur dioxide, **7**: 250
 Specific heat, **7**: 250
 Transition point, **4**: 7
Lead peroxide, thermal expansion, **3**: 43
Lead phosphate
 Electrical conductivity, aqueous solution, **6**: 258
 Reflectivity, selective, **5**: 260
 Refractive index, **7**: 20
 -*Lead arsenate**
 -*Lead chloride**
 -*Lead fluoride**
 -*Lead vanadate*
 Freezing point-solubility, **4**: 52
Lead potassium chloride
 Heat of formation, **5**: 205
 Surface tension, **4**: 445
Lead potassium iodide
 Heat of formation, **5**: 205
Lead potassium sulfate
 Density, aqueous solution, **3**: 91
 Heat of formation, **5**: 205
 Transition temperature, **4**: 8
Lead pyroarsenate
 Density, **1**: 115
 Melting point, **1**: 115
 Refractive index, **1**: 115, 173
Lead pyrophosphate
 Reflectivity, selective, **5**: 260
 Specific heat, **5**: 96
Lead selenate, heat of formation, **5**: 183
Lead selenide
 Heat of formation, **5**: 183
 X-ray diffraction data, **1**: 342
See also Clausthalite.
Lead silicate, Verdet constant, **6**: 426
Lead silver iodide, specific heat, **5**: 97
Lead sodium thiocyanate
 Heat of formation, **5**: 202
Lead stearate
 -*Ethyl ether**
Lead suboxide, heat of formation, **5**: 183
Lead sulfate
 Chromate ion, equilibrium constant of reaction, **7**: 287
 Compressibility, **3**: 50
 Dielectric constant, **6**: 76
 Electrical conductivity, aqueous solution, **6**: 257
 Emission, spectral, **5**: 259
 Free energy, **7**: 249
 Heat of formation, **5**: 183
 Heat of transition, **5**: 183
 Heat of wetting, **5**: 143
 Refractive index, **7**: 20
 Solubility in sulfuric acid, **4**: 43
 Solubility in water, **6**: 257
 Specific heat, **5**: 96; **7**: 249
 Transition temperature, **4**: 7
 -*Ammonium acetate**
 -*Hydrogen chloride**
 -*Lead chromate**
 -*Lead molybdate**
 -*Lead oxide**
 -*Lead tungstate*
 Freezing point-solubility, **4**: 52

Lead sulfate.—(Continued)

- Lithium sulfate*
Freezing point-solubility, 4: 52
- Nitric acid*
Solubility in water, 7: 318
- Potassium acetate*
Freezing point-solubility in water, 4: 336
- Potassium sulfate*
Density, aqueous solution, 3: 97
Freezing point-solubility, 4: 52, 78
- Sodium acetate*
Freezing point-solubility in water, 4: 336; 7: 318
- Sodium carbonate*
Solubility in water, 7: 250
- Sodium chloride*
Solubility in water, 7: 318
- Sodium sulfate*
Freezing point-solubility, 4: 52
- Sulfuric acid*
Density, aqueous solution, 3: 96
Solubility in water, 7: 318
- Lead sulfide**
Compressibility, 3: 50
Decomposition pressure, 7: 249
Dielectric constant, 6: 76
Electrical conductivity, 6: 148, 154
Magnetic field, effect of, 6: 422
Emission, spectral, 5: 254, 257, 258
Entropy, 5: 90
Free energy, 7: 249
Heat content, 5: 90
Heat of formation, 5: 183
Photoconductivity, 6: 66
Photoelectric current, 6: 69
Solution velocity in acids, 5: 59
Specific heat, 5: 90, 96; 7: 249
Thermal conductivity, 5: 217
Thermal expansion, 3: 44
Thermodynamic potential, 5: 90
Vapor pressure, 3: 208
X-ray diffraction data, 1: 342
See also Galena.
- Antimony trisulfide**
- Arsenous sulfide**
- Cuprous sulfide**
- Ferrous sulfide**
- Lead chloride**
- Silicon sulfide*
Freezing point-solubility, 4: 48
- Silver sulfide*
Freezing point-solubility, 4: 52
- Stannous sulfide*
Freezing point-solubility, 4: 49
- Thallous sulfide*
Freezing point-solubility, 4: 52
- Zinc sulfide*
Freezing point-solubility, 4: 52
- Lead tartrate**, solubility in water, 4: 220
- Lead telluride**
Heat of formation, 5: 183
X-ray diffraction data, 1: 342
- Lead tetraacetate**
-*Acetic acid**
- Lead tetraborate**, specific heat, 5: 98
- Lead tetraphenyl**
-*Silicon tetraphenyl*
Freezing point-solubility, 4: 48
- Tetraphenyl tin*
Freezing point-solubility, 4: 49
- Lead thiocyanate**
Electrical conductivity, aqueous solution, 6: 258
Heat of formation, 5: 184
- Lead thiosulfate**
Heat of formation, 5: 183
Specific heat, 5: 96
- Strontium thiosulfate*
Freezing point-solubility in water, 4: 355

Lead trithionate

- Heat of formation, 5: 183
- Lead tungstate**
Specific heat, 5: 98
Transition temperature, 4: 7
- Bismuth tungstate**
- Cerous tungstate**
- Lead chromate**
- Lead molybdate**
- Lead oxide**
- Lead sulfate**
- Lead vanadate**
-*Lead arsenate**
- Lead chloride**
- Lead fluoride**
- Lead phosphate**
- Leadhillite**
Density, 1: 117
Refractive index, 1: 117, 173
- Leather**, 2: 250
Area change with relative humidity, 2: 252
Composition, 2: 251
Moisture content at various humidities, 2: 316, 324, 325
Permeability to air, 2: 253
Permeability to water vapor, 2: 253
Resilience, 2: 254
Stitch tear, 2: 251
Stretch, 2: 251
Tensile strength, 2: 251
Thermal conductivity, 2: 313
Types, 2: 250
Ventilating properties, 2: 253
Water content with change in humidity, 2: 252
- Leather paper.** See Fish paper.
- Leatheroid**
Emission, spectral, 5: 244
Moisture content at various humidities, 2: 323
See also Fish paper, Vulcanized fiber.
- Lechatellierite**
Boiling point, 1: 112, 162
Density, 1: 112
Refractive index, 1: 112, 165
See also Silica.
- Lechesne (alloy)**, 2: 378; cf. 480
- LeClanché dry cell**, 6: 315
- Lecontite**
Density, 1: 151
Refractive index, 1: 151, 168
- Ledebur's bearing alloys**, 2: 378
- Leduc effect**, coefficient of, conversion factors, 1: 29
- Leiden temperature scale**, 1: 54
- Leifite**
Density, 1: 153
Refractive index, 1: 153, 166
- Lemarquand's alloy**, 2: 378
- Lengenbachite**, density, 1: 116, 124
- Length**
Astronomical unit, 1: 34
Conversion factors, 1: 20
Secondary units, 1: 2
- Length degree**, conversion factors, 1: 22
- Leonhardite**
Dehydration behavior, 7: 313
- Leonite**
Density, 1: 158
Refractive index, 1: 158, 168
- Lepidocrocite**
Density, 1: 128
Refractive index, 1: 128, 173; 7: 21
- Lepranthin**
Optical rotatory power, 7: 477
- Leuchtenbergite**
Density, 1: 142
Refractive index, 1: 142, 171
- Leucic acid**
Optical rotatory power, 7: 367

Leucine

- Absorption spectra, 5: 340, 373
Heat of combustion, 5: 168
Optical rotatory power, 7: 375
Solubility in salt solutions, 4: 417
- Leucite**
Density, 1: 158
Refractive index, 1: 158, 165; 7: 28
- Silica*
Freezing point-solubility, 4: 85, 88
- Leucochalcite**
Refractive index, 1: 123, 173
- Leucodigallic acid**
Optical rotatory power, 7: 466
- Leucophanite**
Density, 1: 154
Refractive index, 1: 154, 171
- Leucosphenite**
Density, 1: 154
Refractive index, 1: 154, 172; 7: 27
- Levoglucozan**, specific heat, 5: 103
- Levulinic acid**
Absorption spectra, 5: 376
Density, 3: 29
Electrical conductivity, aqueous solution, 6: 270
Heat of combustion, 5: 165
Heat of fusion, 5: 132
Heat of solution in water, 5: 149
Refractive index, 7: 37
Surface tension, 4: 452
- Chloroform**
- Ethyl ether**
- Xylene*
Distribution coefficients in water, 3: 427
- Levulose**
Absorption spectra, 5: 340
Boiling point elevation in aqueous solution, 3: 327
Decomposition by acid, velocity of, 2: 350
Dielectric constant, aqueous solution, 6: 101
Electrical conductivity, aqueous solution, 6: 277
Freezing point lowering of aqueous solution, 4: 263
Optical rotation, 2: 349; 7: 389
Refractive index, aqueous solution, 7: 69
Solubility in water, 2: 349
Specific heat, 5: 103
Aqueous solution, 5: 125
Verdet constant, 6: 429
Viscosity, aqueous solution, 5: 23
- d-Glucose**
- d-Glucose**-*Sucrose*
- Hydrogen chloride**
- Sucrose*
Viscosity, aqueous solution, 5: 24
- Levynite**
Density, 1: 145
Refractive index, 1: 145, 166
- Lewisite**
Density, 1: 144
Refractive index, 1: 144, 165
- Lewis's magnetochemical theory**, 6: 347
- Liberty pistons (alloy)**, 2: 378; cf. 538
- Libethenite**
Density, 1: 122
Refractive index, 1: 122, 172
- Lichtenberg's alloy**, 2: 378
- Liddel's alloys**, 2: 378; cf. 546
- Light**
Absorption, 5: 248, 264, 268
Petroleum products, 2: 153
Diffusing materials, 5: 264
Diffusion diagrams, 5: 261
Emission by spark discharge in liquids, 5: 433

* Data for system will be found under this compound in Index. Full explanation on page vii.

Light.—(Continued)

- Efficiency, **5**: 245, 437
- Filters, **5**: 264, 271, 435
 - Mercury vapor lamp, **7**: 160
- Glass, transmission by, **2**: 106
- Mechanical equivalent, **5**: 436
- Polarization, **5**: 265
 - By reflection, **5**: 261
- Reaction times to, **1**: 95
- Reflected, polarization of, **5**: 261
- Reflectivity, **5**: 253
- Refractivity, **5**: 248
- Scattered, intensity of, **5**: 266
- Scattered, polarization of, **5**: 265
- Selected sources, **5**: 242, 245
- Spectral absorption, **5**: 268
- Standards, **5**: 434
- Velocity, **1**: 17

Light sources

- Photographic efficiency, **5**: 445

Light-year, definition, **1**: 38**Lightning**, **6**: 445**Lignite**

- Composition, **2**: 131, 134
- Density, **2**: 135

Lignoceric acid

- Arachidic acid**
- Palmitic acid*
 - Freezing point-solubility, **4**: 165
- Stearic acid*
 - Freezing point-solubility, **4**: 166
- Tetracosanic acid*
 - Freezing point-solubility, **4**: 167

Lignum-vitae

- Density, **2**: 315
- Thermal conductivity, **2**: 315

Ligroin

- Electrical conductivity, **6**: 146
- Refractive index, **2**: 153
- Solubility in water, **3**: 392

Lillianite, density, **1**: 116**Lime**

- Expansion on heating, **2**: 84
- See also Calcium oxide.

Limestone

- Bulk density, **2**: 53
- Compressibility, **2**: 54; **3**: 51
- Compressive strength, **2**: 48
- Density, **2**: 315
- Elasticity, **2**: 51
- Hardness, **2**: 50
- Impact hardness, **2**: 51
- Porosity, **2**: 53
- Radioactivity, **1**: 379
- Shearing strength, **2**: 49
- Tensile strength, **2**: 49
- Thermal conductivity, **2**: 55, 315
- Thermal diffusivity, **2**: 56
- Thermal expansion, **2**: 54
- Transverse strength, **2**: 49

Limonene

- Absorption spectra, **5**: 333, 346
- Birefringence, electric, **7**: 111
- Dielectric constant, **6**: 95
- Electrical conductivity, **6**: 144
- Heat of combustion, **5**: 163
- Heat of vaporization, **5**: 138
- Optical rotatory power, **7**: 410
- Refractive index, **7**: 52
- Surface tension, **4**: 460
- Verdet constant, **6**: 426
 - Dispersion, **6**: 433
- X-rays, absorption coefficient, **6**: 14

Limonite, specific heat, **5**: 98**Linalool**

- Absorption spectra, **5**: 347
- Optical rotatory power, **7**: 402
- Surface tension, **4**: 460

Linarite

- Density, **1**: 123
- Refractive index, **1**: 123, 173

Lindackerite

- Density, **1**: 132
- Refractive index, **1**: 132, 172

Line, definition, **1**: 38**Line spectra.** See Spectra.**Linen**

- Moisture content at various humidities, **2**: 323
- Tensile strength, humidity, effect of, **2**: 237
- Thermal conductivity, **2**: 313

Linnaeite, density, **1**: 130**Linoleum**

- Density, **2**: 313
- Thermal conductivity, **2**: 313

Linseed oil

- Electrical conductivity, **6**: 146
- Magnetic susceptibility, **6**: 364
- Rubber softener, **2**: 278

Lionite. See Alundum.**Lipase**, **7**: 153**Lipowitz alloy**, **2**: 378

- Electrical conductivity, **6**: 165, 197
- Specific heat, **5**: 121
- Thermal conductivity, **5**: 223

Lippianol, optical rotatory power, **7**: 464**Liquid crystals**, **1**: 314**Liquid junction potentials**, **6**: 338**Liroconite**

- Density, **1**: 137
- Refractive index, **1**: 137, 172

Liter, **1**: 18Definition, **1**: 1**Liter-atmosphere**, definition, **1**: 38**Lith board**, **2**: 46

- Density, **2**: 313
- Thermal conductivity, **2**: 313

Litharge

- Density, **1**: 115
- Melting point, **1**: 115
- Refractive index, **1**: 115, 168
- Rubber vulcanization, use in, **2**: 282
- See also Lead oxide.

Lithiophilite

- Density, **1**: 150
- Refractive index, **1**: 150, 172

Lithium

- Absorption spectra, solutions, **5**: 329
- Boiling point, **1**: 102
- Cathodoluminescence, **5**: 390
- Compressibility, **3**: 47, 48
- Contact potential, **6**: 57
- Critical potentials, **6**: 71
- Density, **1**: 104; **2**: 456
- Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 104; **6**: 136–138
 - Low temperature, **6**: 127, 133
- Electrode potential, **6**: 332; **7**: 301
- Emission spectra, **5**: 302
- Fluorescence of vapor, **5**: 391
- Free energy of electrode reaction, **7**: 301
- Hall effect, **6**: 416
- Heat of fusion, **1**: 104
- Heat of vaporization, **1**: 102
- Isotopes, **1**: 47
- Magnetic susceptibility, **6**: 355
- Melting point, **1**: 104
- Nernst effect, **6**: 420
- Persistent lines, **5**: 323
- Photoelectric sensitivity, wave length
 - for maximum, **6**: 68
- Photoelectric threshold, **6**: 68
- Photoelectric work function, **6**: 57
- Quantum numbers, **5**: 408
- Specific heat, **1**: 104; **5**: 93
- Spectral series, **5**: 400
- Thermal conductivity, **5**: 220
- Thermal expansion
 - Liquid, **1**: 102; **2**: 463
 - Solid, **1**: 104; **2**: 461

Lithium.—(Continued)

- Thermochemistry, **5**: 199
- Thermoelectric properties, **6**: 214
- Volume change on fusion, **2**: 474
- X-radiation, scattered, distribution of, **6**: 19
- X-ray crystal structure, **1**: 340
- X-rays, absorption coefficient, **6**: 13, 15
- X-rays, scattering, modification by, **6**: 17
- X-rays, scattering of, **6**: 17
- Zeeman effect, **5**: 420
- Ammonia**
- Cadmium**
- Mercury*
 - Density, **2**: 589
 - Electrical conductivity, **6**: 190
 - Equilibrium diagram, **2**: 435
 - Thermoelectric properties, **6**: 220
 - Surface tension, **2**: 591
 - Vapor pressure, partial, **3**: 284
- Potassium*
 - Equilibrium diagram, **2**: 436
- Silicon*
 - Density, **2**: 594
- Sodium*
 - Equilibrium diagram, **2**: 437
- Tin*
 - Equilibrium diagram, **2**: 417
- Lithium acetate**
 - Density, aqueous solution, **3**: 78
 - Electrical conductivity, aqueous solution, **6**: 247, 254
 - Melting point, **1**: 149
 - Refractive index, **1**: 149, 169
 - Aqueous solution, **7**: 73
 - Dispersion, **7**: 101
 - Solubility in water, **4**: 234
 - Viscosity, aqueous solution, **5**: 15
 - X-ray diffraction data, **1**: 345
- Acetic acid**
- Lithium aluminum orthosilicate**
 - Melting point, **4**: 85
- Lithium amide**, heat of formation, **5**: 200
- Lithium benzoate**
 - Density, aqueous solution, **3**: 105
 - Solubility in water, **4**: 234
- Ethyl alcohol**
- Lithium bicarbonate**
 - Heat of formation, **5**: 200
 - Solubility in water, **4**: 234
- Lithium bromate**
 - Density, aqueous solution, **3**: 105
 - Solubility in water, **4**: 233
 - Viscosity, aqueous solution, **5**: 15
- Lithium bromide**
 - Absorption spectra, solutions, **5**: 329
 - Ammine
 - Decomposition pressure, **7**: 302
 - Heat of decomposition, **7**: 302
 - Heat of formation, **5**: 200
 - Boiling point elevation in aqueous solution, **3**: 326
 - Compressibility, **3**: 50
 - Aqueous solution, **3**: 439
 - Density
 - Aqueous solution, **3**: 77, 108; **7**: 73
 - Liquid, **3**: 24
 - Diffusion in water, **5**: 66
 - Electrical conductivity, aqueous solution, **6**: 235, 239
 - Freezing point lowering of aqueous solution, **4**: 258
 - Heat of formation, **5**: 199
 - Hydrates
 - Decomposition pressure, **7**: 302
 - Heat of decomposition, **7**: 302
 - Refractive index, aqueous solution, **7**: 73
 - Solubility in water, **4**: 233
 - Specific heat, aqueous solution, **5**: 123
 - Surface tension, aqueous solution, **4**: 465

Lithium bromide.—(Continued)

- Vapor pressure, **3**: 214
 Aqueous solution, **3**: 369
 Vapor pressure lowering in aqueous solution, **3**: 296
 Viscosity, aqueous solution, **5**: 15
 X-ray diffraction data, **1**: 345
 -Acetone*
 -Acetone*-Ethyl alcohol
 -Acetone*-Methyl alcohol
 -Acetophenone*
 -Aluminum bromide*
 -Arsenous oxide*
 -Barium bromide*
 -Calcium bromide*
 -Ethyl alcohol*
 -Ethyl alcohol*-Glycerol
 -Glycerol*
 -Glycerol*-Methyl alcohol
 -Isoamyl alcohol*
 -Isobutyl alcohol*
 -Lithium hydroxide
 Freezing point-solubility, **4**: 66
 -Magnesium bromide
 Freezing point-solubility, **4**: 63
 -Methyl acetate
 Boiling point elevation, **3**: 340
 -Methyl alcohol
 Boiling point elevation, **3**: 334
 Viscosity, aqueous solution, **5**: 24
 -Potassium bromide
 Freezing point-solubility, **4**: 67
 -Silver bromide
 Freezing point-solubility, **4**: 59
 -Sodium bromide
 Freezing point-solubility, **4**: 67
 -Strontium bromide
 Freezing point-solubility, **4**: 65
Lithium d-camphorate
 -Camphoric acid*
Lithium carbide, heat of formation, **5**: 200
Lithium carbonate
 Boiling point elevation in aqueous solution, **3**: 326
 Decomposition pressure, **7**: 303
 Density, **1**: 149
 Liquid, **3**: 24
 Electrical conductivity, aqueous solution, **6**: 247
 Heat of formation, **5**: 200
 Magnetic susceptibility, **6**: 360
 Melting point, **1**: 149
 Refractive index **1**: 149, 170
 Solubility in water, **4**: 234
 -Ammonium chloride*
 -Ammonium sulfate*
 -Lithium hydroxide
 Vapor pressure, aqueous solution, **3**: 380
 -Lithium nitrate
 Freezing point-solubility, **4**: 67
 -Lithium sulfate
 Freezing point-solubility, **4**: 67
 -Potassium carbonate
 Freezing point-solubility, **4**: 67
 -Potassium chloride
 Solubility in water, **7**: 345
 -Potassium nitrate
 Solubility in water, **7**: 345
 -Potassium sulfate
 Solubility in water, **7**: 345
 -Sodium chloride
 Solubility in water, **7**: 345
 -Sodium sulfate
 Solubility in water, **7**: 345
Lithium chlorate
 Density, **3**: 43
 Aqueous solution, **3**: 76
 Electrical conductivity, aqueous solution, **6**: 246, 254
 Freezing point lowering of aqueous solution, **4**: 258

Lithium chlorate.—(Continued)

- Refractive index, aqueous solution, **7**: 73
 Dispersion, **7**: 101
 Solubility in water, **4**: 233
 Specific heat, aqueous solution, **5**: 123
 Transition temperature, **4**: 7
 Viscosity, aqueous solution, **5**: 15
Lithium chloride
 Absorption spectra, **5**: 329
 Amines
 Decomposition pressure, **7**: 301
 Heat of decomposition, **7**: 301
 Heat of formation, **5**: 200
 Boiling point elevation in aqueous solution, **3**: 326
 Compressibility, **3**: 50
 Aqueous solution, **3**: 439
 Concentration cells, **6**: 327
 Density
 Aqueous solution, **3**: 76, 77, 108; **7**: 72
 Liquid, **3**: 24; **4**: 443
 Solid, **3**: 43
 Diffusion in ethyl alcohol, **5**: 73
 Diffusion in methyl alcohol, **5**: 72
 Diffusion in water, **5**: 66
 Electrical conductivity, **6**: 149
 Aqueous solution, **6**: 231, 233, 239
 Ethylamine complexes
 Decomposition pressure, **7**: 302
 Heat of decomposition, **7**: 302
 Freezing point lowering in aqueous solution, **4**: 258
 Heat of formation, **5**: 199
 Hydrates
 Decomposition pressure, **7**: 301
 Heat of decomposition, **7**: 301
 Magnetic rotatory power, aqueous solution, **6**: 431
 Magnetic susceptibility, **6**: 360
 Methylamine complexes
 Decomposition pressures, **7**: 302
 Heat of decomposition, **7**: 302
 Heat of formation, **5**: 200
 Refractive index, aqueous solution, **7**: 72
 Solubility in antimony trichloride, **4**: 47
 Solubility in water, **4**: 233
 Specific heat, **5**: 100
 Aqueous solution, **5**: 123
 Surface tension, **4**: 443
 Aqueous solution, **4**: 465
 Transference number, **6**: 309–311
 Vapor pressure, **3**: 214
 Aqueous solution, **3**: 368
 Vapor pressure lowering in aqueous solution, **3**: 296
 Viscosity, aqueous solution, **5**: 15
 X-ray diffraction data, **1**: 345
 -Acetone*
 -Acetophenone*
 -Aluminum chloride*
 -Ammonia*
 -Ammonium chloride*
 -Amyl alcohol*
 -Arsenous oxide*
 -Barium chloride*
 -Barium hydroxide*
 -Bismuth chloride*
 -Butyl alcohol*
 -Calcium chloride*
 -Cesium chloride*
 -Cesium chloride*-Sodium chloride
 -Cobaltous chloride*
 -Cupric chloride*
 -Cupric sulfate*
 -Cuprous chloride*
 -Ethyl alcohol*
 -Hydrogen chloride*
 -Isoamyl alcohol*
 -Isobutyl alcohol*
 -Lead chloride*

Lithium chloride.—(Continued)

- Lithium hydroxide
 Freezing point-solubility, **4**: 66
 -Lithium sulfate
 Freezing point-solubility in water, **4**: 287
 -Magnesium chloride
 Freezing point-solubility, **4**: 63
 -Manganese chloride
 Freezing point-solubility, **4**: 60
 -Mercuric chloride
 Freezing point-solubility, **4**: 305
 -Methyl acetate
 Boiling point elevation, **3**: 340
 -Methyl alcohol
 Boiling point elevation, **3**: 334
 Density, **3**: 140
 Vapor pressure lowering, **3**: 300
 -Methylamine
 Density, **3**: 140
 Viscosity, **5**: 29
 -Phthalic acid
 Density, aqueous solution, **3**: 102
 Freezing point-solubility in water, **4**: 419
 -Potassium chloride
 Electrical conductivity, **6**: 151
 Freezing point-solubility, **4**: 66
 -Potassium chloride-Sodium chloride
 Freezing point-solubility, **4**: 75, 83
 -Propyl alcohol
 Boiling point elevation, **3**: 340
 -Pyridine
 Osmotic pressure, **4**: 431
 -Quinoline
 Freezing point-solubility, **4**: 205
 -Rubidium chloride
 Freezing point-solubility, **4**: 66
 -Rubidium chloride-Sodium chloride
 Freezing point-solubility, **4**: 75
 -Silver chloride
 Freezing point-solubility, **4**: 58
 -Sodium chloride
 Density, aqueous solution, **3**: 99
 Freezing point-solubility, **4**: 66
 Freezing point-solubility in water, **4**: 313
 -Strontium chloride
 Freezing point-solubility, **4**: 65
 -Succinic acid
 Freezing point-solubility in water, **4**: 413
 -Sucrose
 Density, aqueous solution, **3**: 102
 Viscosity, aqueous solution, **5**: 24
 -Thallium monochloride
 Freezing point-solubility, **4**: 53
Lithium chloroaurate
 Solubility in water, **4**: 234
Lithium chromate
 Density, aqueous solution, **3**: 79
 Electrical conductivity, aqueous solution, **6**: 247, 254
 Reflectivity, selective, **5**: 260
 Refractive index, aqueous solution, **7**: 73
 Dispersion, **7**: 101
 Solubility in water, **4**: 234
 Vapor pressure lowering in aqueous solution, **3**: 296
Lithium citrate
 Density, aqueous solution, **3**: 105
 -Ethyl alcohol*
Lithium cyanide, heat of formation, **5**: 200
Lithium cyanoplatinate
 Solubility in water, **4**: 234
 Transition points, **4**: 234
Lithium cyanoplatinite
 Luminescence, **5**: 389
Lithium dichromate
 Density, aqueous solution, **3**: 79
 Electrical conductivity, aqueous solution, **6**: 247, 254

* Data for system will be found under this compound in Index. Full explanation on page vii.

Lithium dichromate.—(Continued)

- Refractive index, aqueous solution, **7**: 73
- Dispersion, **7**: 101
- Solubility in water, **4**: 234

Lithium dihydroxytartrate

- Solubility in water, **4**: 234

Lithium disilicate

- Density, **1**: 149
- Melting point, **1**: 149

Lithium dithionate

- Density, **1**: 149
- Refractive index, **1**: 149, 170; **7**: 26
- Vapor pressure lowering in aqueous solution, **3**: 296

Lithium flame, electrical properties, 6: 156**Lithium fluoride**

- Compressibility, **3**: 50
- Density
 - Aqueous solution, **3**: 105
 - Liquid, **3**: 24, **4**: 442
- Heat of formation, **5**: 199
- Solubility in water, **4**: 233
- Specific heat, **5**: 100
- Surface tension, **4**: 442
- Vapor pressure, **3**: 214
- X-radiation, scattered, distribution of, **6**: 20

X-ray diffraction data, 1: 345

- Aluminum fluoride*
- Lithium hydroxide
 - Freezing point-solubility, **4**: 66
- Magnesium fluoride
 - Freezing point-solubility, **4**: 62

Lithium fluosilicate

- Decomposition pressure, **7**: 303
- Heat of formation, **5**: 200
- Vapor pressure lowering in aqueous solution, **3**: 296

Lithium formate

- Density, aqueous solution, **3**: 78, 105
- Electrical conductivity, aqueous solution, **6**: 247, 254
- Heat of formation, **5**: 200
- Solubility in water, **4**: 234
- Surface tension, aqueous solution, **4**: 465
- X-ray diffraction data, **1**: 345
- Formamide*
- Formic acid*

Lithium hydride

- Entropy, **5**: 91
- Heat of formation, **5**: 199
- Specific heat, **5**: 91, 100
- X-ray diffraction data, **1**: 345

Lithium hydrogen acetate

- Decomposition pressure, **7**: 303

Lithium hydrogen malate

- Density, aqueous solution, **3**: 78
- Refractive index, **1**: 149, 170

Lithium hydrogen sulfate, vapor pressure lowering in aqueous solution, 3: 296**Lithium hydroxide**

- Absorption spectra, solutions, **5**: 327
- Compressibility, aqueous solution, **3**: 439
- Concentration cells, **6**: 327
- Decomposition pressure, **7**: 301
- Density, aqueous solution, **3**: 76
- Dielectric constant, aqueous solution, **6**: 104
- Diffusion in water, **5**: 66
- Electrical conductivity, aqueous solution, **6**: 246, 254
- Freezing point lowering in aqueous solution, **4**: 258
- Heat of formation, **5**: 199
- Heat of neutralization, **5**: 212
- Refractive index, aqueous solution, **7**: 72
- Solubility in water, **4**: 233
- Specific heat, **5**: 100
 - Aqueous solution, **5**: 123
- Surface tension, aqueous solution, **4**: 465

Lithium hydroxide.—(Continued)

- Vapor pressure lowering in aqueous solution, **3**: 296
- Viscosity, aqueous solution, **5**: 15
- Arsenous acid*
- Boric acid*
- Chromic acid*
- Lithium bromide*
- Lithium carbonate*
- Lithium chloride*
- Lithium fluoride*
- Lithium iodide
 - Freezing point-solubility, **4**: 66
- Phenol
 - Freezing point-solubility in water, **4**: 416

Lithium hydroxybenzoate (o-, m-, p-)

- Solubility in water, **4**: 234

Lithium hypophosphate, electrical conductivity, aqueous solution, 6: 258**Lithium iodate**

- Density, aqueous solution, **3**: 78, 105
- Electrical conductivity, aqueous solution, **6**: 241, 247, 254
- Refractive index, aqueous solution, **7**: 73
- Solubility in water, **4**: 233
- Specific heat, aqueous solution, **5**: 123
- Viscosity, aqueous solution, **5**: 15

Lithium iodide

- Absorption spectra, solutions, **5**: 329
- Ammines
 - Decomposition pressure, **7**: 303
 - Heat of decomposition, **7**: 303
 - Heat of formation, **5**: 200
- Boiling point elevation in aqueous solution, **3**: 326
- Compressibility, **3**: 50
 - Aqueous solution, **3**: 439
- Decomposition pressure of hydrates, **7**: 302
- Density, aqueous solution, **3**: 77, 108; **7**: 73
- Diffusion in water, **5**: 66
- Electrical conductivity, aqueous solution, **6**: 235, 239
- Freezing point lowering of aqueous solution, **4**: 258
- Heat of formation, **5**: 199
- Refractive index, aqueous solution, **7**: 73
- Solubility in water, **4**: 233
- Specific heat, aqueous solution, **5**: 123

Sulfur dioxide complexes

- Decomposition pressure, **7**: 303
- Heat of decomposition, **7**: 303
- Heat of formation, **5**: 199
- Surface tension, aqueous solution, **4**: 465
- Vapor pressure, **3**: 214
 - Aqueous solution **3**: 369
- Vapor pressure lowering in aqueous solution, **3**: 296
- X-ray diffraction data, **1**: 345
- Ethyl alcohol*
- Iodine*-Nitrobenzene
- Isoamyl alcohol*
- Isobutyl alcohol*
- Lithium hydroxide*
- Methyl acetate
 - Boiling point elevation, **3**: 340
- Silver iodide
 - Freezing point-solubility, **4**: 59

Lithium malate

- Density, aqueous solution, **3**: 78

Lithium manganate, electrical conductivity, aqueous solution, 6: 247**Lithium mercuric bromide**

- Heat of formation, **5**: 200

Lithium mercuric cyanide, heat of formation, 5: 200**Lithium mesodisilicate**

- Decomposition temperature, **4**: 85

Lithium metaaluminate, melting point, 4: 85**Lithium metaborate**

- Freezing point lowering of aqueous solution, **4**: 258
- Solubility in water, **4**: 235
- Surface tension, **4**: 443
- Lithium metasilicate
 - Freezing point-solubility, **4**: 85
- Sodium metaborate
 - Freezing point-solubility, **4**: 67

Lithium metasilicate

- Density, **1**: 149
- Melting point, **1**: 54, 149; **4**: 85
- Refractive index, **1**: 149, 165, 167, 174
- Aluminum metasilicate*
- Lithium metaborate*
- Silica
 - Freezing point-solubility, **4**: 85
- Zinc metasilicate
 - Freezing point-solubility, **4**: 85

Lithium molybdate, solubility in water, 4: 234**Lithium naphthalene-1, 5-disulfonate**

- Crystallography, **1**: 322
- Density, **1**: 149
- Refractive index, **1**: 149, 171

Lithium nitrate

- Absorption spectra, solutions, **5**: 329
- Boiling point elevation in aqueous solution, **3**: 326
- Compressibility, aqueous solution, **3**: 440
- Density
 - Aqueous solution, **3**: 78, 108
 - Liquid, **3**: 24; **4**: 443
 - Solid, **1**: 149; **3**: 44
- Diffusion in water, **5**: 66
- Electrical conductivity, **6**: 149
 - Aqueous solution, **6**: 231, 238
- Freezing point lowering of aqueous solution, **4**: 258
- Heat of formation, **5**: 199
- Heat of fusion, **5**: 131
- Magnetic susceptibility, **6**: 360
- Melting point, **1**: 149
- Refractive index, **1**: 149, 167
 - Aqueous solution, **7**: 73
- Solubility in water, **4**: 234
- Specific heat
 - Aqueous solution, **5**: 123
 - Liquid, **5**: 106
 - Solid, **5**: 100
- Surface tension, **4**: 443
 - Aqueous solution, **4**: 465
- Vapor pressure, aqueous solution, **3**: 369
- Vapor pressure lowering in aqueous solution, **3**: 296
- Viscosity, **7**: 212
 - Aqueous solution, **5**: 15
- Acetone*
- Ammonia*
- Ammonium chloride*-Ammonium nitrate
- Ammonium nitrate*
- Barium nitrate*
- Barium nitrate*-Potassium nitrate
- Ethyl alcohol*
- Ethyl alcohol*-Formamide
- Formamide*
- Isoamyl alcohol*
- Isobutyl alcohol*
- Lithium carbonate*
- Lithium sulfate
 - Freezing point-solubility, **4**: 67
 - Freezing point-solubility in water, **4**: 324, 387
- Methyl alcohol
 - Boiling point elevation, **3**: 334
- Potassium nitrate
 - Freezing point-solubility, **4**: 67

* Data for system will be found under this compound in Index. Full explanation on page vii.

Lithium nitrate.—(Continued)

- Potassium nitrate-Sodium nitrate^{*}
Freezing point-solubility, 4: 75, 83
- Silver nitrate
Density, aqueous solution, 3: 98
Refractive index, aqueous solution, 7: 96
- Sodium nitrate
Electrical conductivity, 6: 151
Freezing point-solubility, 4: 67
- Thallium monochloride
Solubility in water, 7: 321
- Lithium nitride**, heat of formation, 5: 199
- Lithium nitrite**
Density, aqueous solution, 3: 105
Electrical conductivity, aqueous solution, 6: 247
Freezing point lowering of aqueous solution, 4: 258
Solubility in water, 4: 234
- Silver nitrite
Freezing point-solubility in water, 4: 357, 391
- Lithium orthosilicate**
Density, 1: 149
Heat of fusion, 5: 131
Melting point, 1: 149; 4: 85
Refractive index, 1: 149, 174
- Aluminum orthosilicate^{*}
- Calcium orthosilicate^{*}
- Zirconium orthosilicate
Density, 3: 134
Freezing point-solubility, 4: 85
- Lithium orthosulfantimonate**
Solubility in water, 4: 234
- Lithium oxalate**
Density, aqueous solution, 3: 78
Solubility in water, 4: 234
X-ray diffraction data, 1: 345
- Lithium oxide**
Heat of formation, 5: 199
Magnetic susceptibility, 6: 360
Melting point, 4: 85
X-ray diffraction data, 1: 345
- Aluminum oxide^{*}
- Aluminum oxide*-Silica
- Boric oxide^{*}
- Calcium oxide*-Silica
- Silica
Freezing point-solubility, 4: 85, 87
- Silica-Zirconium oxide
Freezing point-solubility, 4: 92
- Lithium perchlorate**
Electrical conductivity, aqueous solution, 6: 241, 247
- Acetone^{*}
- Butyl alcohol^{*}
- Ethyl acetate^{*}
- Ethyl alcohol^{*}
- Ethyl ether^{*}
- Isobutyl alcohol^{*}
- Methyl alcohol
Density, 3: 141
- Propyl alcohol
Density, 3: 141
- Lithium peroxide**
Heat of formation, 5: 199
- Lithium phosphate**
Electrical conductivity, aqueous solution, 6: 258
Reflectivity, selective, 5: 260
- Lithium picrate**, electrical conductivity, aqueous solution, 6: 247
- Lithium platinocyanide**
-Potassium platinocyanide
Freezing point-solubility in water, 4: 378
- Lithium potassium chloride**
Luminescence, 5: 389
- Lithium potassium cyanoplatinite**
Luminescence, 5: 389

Lithium potassium ferrocyanide

- Refractive index, 1: 158, 171
- Lithium potassium platinocyanide**
Luminescence, 5: 389
Refractive index, 7: 28
- Lithium potassium selenate**
Pyroelectric effect, 6: 210
- Lithium potassium sulfate**
Density, 1: 158
Dielectric constant, 6: 99
Optical rotatory power, 7: 354
Pyroelectric constant, 6: 210, 212
Refractive index, 1: 158, 166; 7: 28
Transition temperature, 4: 8
- Lithium potassium sulfochromate**
Optical rotatory power, 7: 354
- Lithium potassium tartrate**
Crystallography, 1: 323
Density, 1: 158
Refractive index, 1: 158, 174
- Lithium rubidium cyanoplatinite**
Luminescence, 5: 389
- Lithium rubidium platinocyanide**
Refractive index, 7: 29
- Lithium rubidium sulfate**
Transition temperature, 4: 8
- Lithium rubidium tartrate**
Crystallography, 1: 324
Density, 1: 160
Refractive index, 1: 160, 170
- Lithium salicylate**
Boiling point elevation in aqueous solution, 3: 326
Density, aqueous solution, 3: 105
- Ethyl alcohol^{*}
- Propyl alcohol
Boiling point elevation, 3: 340
- Lithium selenate**
Pyroelectric constant, 6: 210, 212
- Lithium selenide**, heat of formation, 5: 199
- Lithium selenite**, solubility in water, 4: 234
- Lithium silicate**
Freezing point lowering of aqueous solution, 4: 258
Heat of formation, 5: 200
Heat of fusion, 5: 131
Surface tension, 4: 443
- Lithium sodium selenate**
Emission, spectral, 5: 259
Reflectivity, selective, 5: 260
- Lithium sodium sulfate**
Pyroelectric constant, 6: 210, 212
- Lithium sodium tartrate**
Crystallography, 1: 323
Refractive index, 1: 154, 169
- Lithium stannate**, solubility in water, 4: 234
- Lithium succinate**
Density, aqueous solution, 3: 78
- Lithium sulfate**
Boiling point elevation in aqueous solution, 3: 326
Compressibility, aqueous solution, 3: 439
Concentration cell, 6: 328
Decomposition pressure of hydrate, 7: 303
Density
Aqueous solution, 3: 78, 108
Liquid, 3: 24; 4: 443
Solid, 1: 149
Diffusion in water, 5: 66
Electrical conductivity, aqueous solution, 6: 236, 240
Freezing point lowering of aqueous solution, 4: 258
Heat of formation, 5: 199
Heat of transition, 5: 199
Magnetic susceptibility, 6: 360
Melting point, 1: 149
Pyroelectric constant, 6: 210, 212
Reflectivity, selective, 5: 260

Lithium sulfate.—(Continued)

- Refractive index, 1: 149, 168
- Aqueous solution, 7: 73
Dispersion, 7: 101
- Solubility in water, 4: 233
- Surface tension, 4: 443
Aqueous solution, 4: 465
- Transition temperature, 4: 7
- Vapor pressure lowering in aqueous solution, 3: 296
- Viscosity, aqueous solution, 5: 15
- Acetone^{*}
- Ammonia^{*}
- Ammonium sulfate^{*}
- Ammonium sulfate*-Cupric sulfate
- Ammonium sulfate*-Ethyl alcohol
- Ammonium sulfate*-Ferrous sulfate
- Barium sulfate^{*}
- Cadmium sulfate^{*}
- Calcium sulfate^{*}
- Cobaltous sulfate^{*}
- Cupric chloride^{*}
- Cupric sulfate^{*}
- Ferrous sulfate^{*}
- Lead sulfate^{*}
- Lithium carbonate^{*}
- Lithium chloride^{*}
- Lithium nitrate^{*}
- Manganese sulfate
Freezing point-solubility, 4: 60
- Potassium sulfate
Freezing point-solubility, 4: 67, 79
- Silver sulfate
Freezing point-solubility, 4: 59, 78
- Sodium sulfate
Freezing point-solubility, 4: 67, 79
- Strontium sulfate
Freezing point-solubility, 4: 65
- Sulfuric acid
Freezing point-solubility, 4: 43
Freezing point-solubility in water, 4: 353, 391
- Thorium sulfate
Freezing point-solubility in water, 4: 336
- Lithium sulfide**
X-ray diffraction data, 1: 345
- Lithium sulfantimonate**
-Ethyl alcohol^{*}
- Lithium tartrate**
Density, aqueous solution, 3: 78
- Lithium thiocyanate**
Density, aqueous solution, 3: 78
Electrical conductivity, aqueous solution, 6: 247, 254
Refractive index, aqueous solution, 7: 73
Dispersion, 7: 101
- Methyl acetate
Boiling point elevation, 3: 340
- Lithium thiosulfate**, specific heat, 5: 100
- Lithium thorium chloride**
Heat of formation, 5: 200
- Lithium trisodium molybdate**, piezoelectric constant, 6: 210
- Lithium trisodium selenate**, pyroelectric constant, 6: 210, 212
- Lithium vanadate**, solubility in water, 4: 235
- Lithopone**
Albedo, 5: 262
Phototropy, 7: 167
Rubber, use in, 2: 286
- Lithosphere**, radioactivity, 1: 377
- Little's speculum**, 2: 378
- Livingstonite**
Density, 1: 121
Refractive index, 1: 121, 173
- Löllingite**, density, 1: 129
- Loewite**
Density, 1: 153
Refractive index, 1: 153, 166
Transition point, 1: 153

* Data for system will be found under this compound in Index. Full explanation on page vii.

Longiforic acidOptical rotatory power, **7**: 466**Longitude**Celestial, **1**: 35Definition, **1**: 38**Lophine**

-Diphenyl*

-Menthol

Boiling point elevation, **3**: 347

-Naphthalene

Boiling point elevation, **3**: 347

-Phenol

Boiling point elevation, **3**: 345**Lorandite**Density, **1**: 118Refractive index, **1**: 118, 174**Lorenzenite**, refractive index, **7**: 26**Lorettoite**Density, **1**: 115Refractive index, **1**: 115, 168**Loschmidt's number**Definition, **1**: 38Value, **1**: 18**Lossenite**, refractive index, **1**: 129, 173**Loud speakers**, **6**: 454, 455**Lowroff phosphor bronze**, **2**: 378; *cf.* 561, 562**Lubricants**, **2**: 164Critical temperatures, **2**: 166**Lubricating film**, rupture of, **2**: 165**Lubricating oils**Bromine number, **2**: 154Compressibility, **2**: 146Density, **2**: 140, 145, 156Fire point, **2**: 156Flash point, **2**: 150, 156Heat of combustion, **2**: 152Ignition temperature, **2**: 151Iodine numbers, **2**: 154Light absorption, coefficient of, **2**: 153Petroleum, content of, **2**: 139Pour point, **2**: 156Refractive index, **2**: 153Surface tension, **2**: 146Viscosity, **2**: 146, 156Pressure, effect of, **2**: 148**Lubrication**, **2**: 164**Lucerno (alloy)**, **2**: 378; *cf.* 469, 480, 600, 608**Lucero (alloy)**, **2**: 378; *cf.* 604Electrical conductivity, **6**: 170**Lucinite**Density, **1**: 137Refractive index, **1**: 137, 171**Ludlamite**Density, **1**: 129Refractive index, **1**: 129, 172**Ludlum (alloy)**, **2**: 378**Ludwigite**Density, **1**: 142Refractive index, **1**: 142, 173**Lueneburgite**Density, **1**: 142Refractive index, **1**: 142, 170**Lumbers, artificial**, **2**: 46**Lumen**, definition, **1**: 38**Lumen (alloy)**, **2**: 378; *cf.* 546**Luminal**, absorption spectra, **5**: 366**Luminescence**, **5**: 386Decay, **5**: 390Pressure, effect of, **5**: 390**Luminous flux**, definition, **1**: 21**Luminous intensity**, conversion factor, **1**: 26**Lunar data**, **1**: 392**Lupinidine**, optical rotatory power, **7**: 475**Lurgimetall**, **2**: 378, 556**Lutecin (alloy)**, **2**: 378**Lutecium**Emission spectra, **5**: 303Persistent lines, **5**: 323**Lutecium**.—(*Continued*)X-ray absorption limits, **6**: 40X-ray emission spectra, **6**: 40X-ray series, limiting frequencies, **6**: 35**Lutecium sulfate**, decomposition pressure, **7**: 291**2, 4-Lutidine**Absorption spectra, **5**: 342

-Ethyl alcohol*

2, 6-LutidineAbsorption spectra, **5**: 342Viscosity, **5**: 49; **7**: 218

-Ethyl acetoacetate*

Lux, definition, **1**: 38**Lycoaconitine**, optical rotatory power, **7**: 478**Lycopodium powder**, thermal conductivity, **2**: 315**Lynite (alloy)**, **2**: 378; *cf.* 467, 534, 536, 601**Lynux bronze**, **2**: 378**Lysine**, absorption spectra, **5**: 370**Lyxose**Crystallography, **1**: 325Optical rotatory power, **2**: 354Refractive index, **7**: 29Solubility in aqueous ethyl alcohol, **4**: 404**M. W. metal**, **2**: 380**McAdamite (alloy)**, **2**: 379; *cf.* 537, 601**Macleod's formula** (surface tension), **4**: 434**McCoy number**, **1**: 368**McFarland and Harder alloys**, **2**: 379**Mach's alloy**, **2**: 378; *cf.* 464, 542**Mach's speculum**, **2**: 378**Macht's yellow metal**, **2**: 378; *cf.* 555, 602**McKechnie's bronze**, **2**: 379**Mackenzie metal**, **2**: 378**McKinney alloys**, **2**: 379; *cf.* 534**McLure alloy**, **2**: 379**Magdala red**, refractive index, **7**: 12, 15**Magnalite (alloy)**, **2**: 378; *cf.* 601, 608Endurance limits, **2**: 601, 608**Magnalium (alloy)**, **2**: 378; *cf.* 464, 542, 601, 608Emission, spectral, **5**: 254**Magnesia asbestos**Density, **2**: 313Thermal conductivity, **2**: 313**Magnesia brick**, gamma rays, absorption coefficient, **6**: 20**Magnesia cements**, **2**: 124Compressive strength, **2**: 124Elastic limit, **2**: 124Modulus of elasticity, **2**: 124Modulus of rupture, **2**: 124Setting time, **2**: 128Tensile strength, **2**: 124Thermal conductivity, **2**: 314Thermal expansion, **2**: 128Wearing resistance, **2**: 128**Magnesia concretes**, **2**: 124Electrical conductivity, **2**: 128Specific heat, **2**: 128Thermal conductivity, **2**: 128**Magnesioperrite**Density, **1**: 142Refractive index, **1**: 142, 166**Magnesioludwigite**Density, **1**: 142Refractive index, **1**: 142, 173**Magnesite**Density, **1**: 141Expansion on heating, **2**: 84Refractive index, **1**: 141, 167*See also* Magnesium carbonate.**Magnesite brick**Crushing strength, **2**: 83Density, **2**: 82Electrical conductivity, **2**: 86**Magnesite brick**.—(*Continued*)Expansion on heating, **2**: 84Fusion temperature, **2**: 83Porosity, **2**: 82Specific heat, **2**: 85Temperature of failure under load, **2**: 83Thermal conductivity, **2**: 85Thermal expansion, **2**: 83**Magnesium**Absorption, index of, **5**: 249Absorption spectra, solutions, **5**: 329Boiling point, **1**: 102; **3**: 205Cathodoluminescence, **5**: 388, 390Compressibility, **3**: 47, 48Condensation, irreversible, temperature of, **5**: 53Contact potential, **6**: 57Critical potentials, **6**: 71

Density

Liquid, **1**: 102; **2**: 457, 463Solid, **1**: 104; **2**: 456Electrical conductivity, **1**: 104; **6**: 136, 137, 140Low temperature, **6**: 127, 133Electrode potential, **7**: 291Electrons, reflection of, **6**: 63Electrons, secondary emission of, **6**: 64Emission, spectral, **5**: 253Emission spectra, **5**: 303Endurance limits, **2**: 604Entropy, **5**: 88Gamma rays, absorption coefficient, **6**: 14Hall effect, **6**: 416Heat content, **5**: 88Heat of fusion, **1**: 104; **2**: 458Heat of vaporization, **1**: 102; **2**: 458Isotopes, **1**: 47Magnetic susceptibility, **6**: 355Mechanical properties, **2**: 544Melting point, **1**: 104Persistent lines, **5**: 323Photoelectric threshold, **6**: 68Quantum numbers, **5**: 408Refraction, index of, **5**: 249; **7**: 23Solution velocity in aqueous acids, **5**: 57-59Sound, velocity of, in, **6**: 465Specific heat, **1**: 104; **5**: 85, 88, 93Spectral series, **5**: 400Thermal conductivity, **5**: 220, 221, 223

Thermal expansion

Liquid, **1**: 102; **2**: 463Solid, **1**: 104; **2**: 461Thermochemistry, **5**: 195Thermodynamic potential, **5**: 88Thermoelectric properties, **6**: 214, 225Vapor pressure, **3**: 205Viscosity, normal coefficient, **5**: 7Volume change on fusion, **2**: 474X-ray absorption limits, **6**: 36X-ray crystal structure, **1**: 340X-ray emission spectra, **6**: 36X-ray series, limiting frequencies, **6**: 35

X-rays

Absorption coefficient, **6**: 13, 15Scattering, modification by, **6**: 17Scattering coefficient, **6**: 17Zeeman effect, **5**: 420

-Aluminum*

-Aluminum*-Cadmium-Copper

-Aluminum*-Cadmium-Copper-Manganese

-Aluminum*-Cadmium-Copper-Manganese-Zinc

-Aluminum*-Copper

-Aluminum*-Copper-Iron

-Aluminum*-Copper-Manganese

-Aluminum*-Copper-Manganese-Nickel

-Aluminum*-Copper-Manganese-Zinc

-Aluminum*-Copper-Nickel

-Aluminum*-Copper-Nickel-Silicon

Magnesium.—(Continued)

- Aluminum*-Copper-Silicon
- Aluminum*-Manganese
- Aluminum*-Nickel
- Aluminum*-Silicon
- Aluminum*-Zinc
- Antimony*
- Bismuth*
- Cadmium*
- Cadmium*-Zinc
- Calcium*
- Cerium*
- Copper*
- Copper*-Zinc
- Gold*
- Lead*
- Manganese
- Specific volume, **2**: 544
- Mercury
- Equilibrium diagram, **2**: 436
- Vapor pressure, partial, **3**: 284
- Nickel
- Equilibrium diagram, **2**: 437
- Specific heat, **5**: 121
- Silicon
- Equilibrium diagram, **2**: 437
- Mechanical properties, **2**: 544
- Specific heat, **5**: 121
- X-ray diffraction data, **1**: 344
- Silver
- Electrical conductivity, **6**: 161
- Equilibrium diagram, **2**: 422
- Hardness, **2**: 544, 585
- Specific heat, **5**: 119
- Sodium
- Equilibrium diagram, **2**: 437
- Thallium
- Equilibrium diagram, **2**: 437
- Tin
- Electrical conductivity, **6**: 192
- Equilibrium diagram, **2**: 417
- Mechanical properties, **2**: 544
- X-ray diffraction data, **1**: 344, 349
- Zinc
- Electrical conductivity, **6**: 192
- Endurance limits, **2**: 604
- Equilibrium diagram, **2**: 437
- Heat of fusion, **2**: 459
- Mechanical properties, **2**: 545
- Specific heat, **5**: 121
- Magnesium acetate**
- Crystallography, **1**: 321
- Density, **1**: 142
- Aqueous solution, **3**: 72; **7**: 72
- Electrical conductivity, aqueous solution, **6**: 245, 254
- Refractive index, **1**: 142, 169
- Aqueous solution, **7**: 71
- Specific heat, aqueous solution, **5**: 123
- Surface tension, aqueous solution, **4**: 465
- Viscosity, aqueous solution, **5**: 14
- Magnesium aluminate**
- Melting point, **4**: 84
- Magnesium arsenate**
- Heat of formation, **5**: 195
- Magnesium benzoate**
- Solubility in water, **4**: 229
- Magnesium bicarbonate**
- Free energy of ionization, **7**: 293
- Heat of ionization, **7**: 293
- Magnesium bromate**
- Density, aqueous solution, **3**: 72
- Electrical conductivity, aqueous solution, **6**: 245, 254
- Refractive index, **1**: 141, 165
- Magnesium bromide**
- Absorption spectra, solutions, **5**: 327
- Ammine
- Decomposition pressure, **7**: 292
- Heat of decomposition, **7**: 292
- Heat of formation, **5**: 195

Magnesium bromide.—(Continued)

- Decomposition pressure of hydrates, **7**: 291
- Density, aqueous solution, **3**: 71
- Electrical conductivity, aqueous solution, **6**: 234, 239
- Freezing point lowering of aqueous solution, **4**: 257
- Heat of formation, **5**: 195
- Magnetic susceptibility, **6**: 359
- Solubility in water, **4**: 228
- Specific heat, aqueous solution, **5**: 123
- Transference number, **6**: 311
- Vapor pressure, aqueous solution, **3**: 368
- Vapor pressure lowering in aqueous solution, **3**: 295
- Acetamide*
- Acetanilide*
- Acetic acid*
- Acetic anhydride*
- Acetone*
- Aluminum bromide*
- Aniline*
- Benzaldehyde*
- tert.-Butyl alcohol*
- Ethyl alcohol*
- Ethyl ether*
- Formic acid*
- Isoamyl alcohol*
- Isobutyl alcohol*
- Isopropyl alcohol*
- Lithium bromide*
- Methyl alcohol
- Freezing point-solubility, **4**: 202
- Methylal
- Freezing point-solubility, **4**: 203
- Phenylhydrazine
- Freezing point-solubility, **4**: 203
- Potassium bromide
- Freezing point-solubility, **4**: 63
- Propyl alcohol
- Freezing point-solubility, **4**: 203
- Sodium bromide
- Freezing point-solubility, **4**: 63
- Urea
- Freezing point-solubility, **4**: 202
- Urethan
- Freezing point-solubility, **4**: 203
- Magnesium bromide etherate**
- Ethyl ether*
- Magnesium d-camphorate**
- Camphoric acid*
- Magnesium carbonate**
- Albedo, **5**: 262, 263
- Carbon dioxide, reaction with, **7**: 293
- Decomposition pressure, **7**: 292
- Electrical conductivity, aqueous solution, **6**: 258
- Heat of decomposition, **7**: 292
- Heat of formation, **5**: 195
- Magnetic susceptibility, **6**: 359
- Reflectivity, selective, **5**: 260
- Residual rays, **5**: 261
- Rubber, effect on, **2**: 287
- Specific heat, **5**: 99
- Thermal conductivity, **5**: 217, 232
- Thermal expansion, **3**: 44
- X-ray diffraction data, **1**: 344
- See also Magnesite.
- Potassium bicarbonate
- Solubility in water, **7**: 340
- Sodium carbonate
- Freezing point-solubility in water, **4**: 372; **7**: 340
- Sodium chloride
- Freezing point-solubility in water, **4**: 300; **7**: 339
- Sodium sulfate
- Freezing point-solubility in water, **4**: 334; **7**: 339

Magnesium chlorate

- Density, aqueous solution, **3**: 71, 105
- Electrical conductivity, aqueous solution, **6**: 245, 254
- Freezing point lowering of aqueous solution, **4**: 257
- Refractive index, aqueous solution, **7**: 71
- Solubility in water, **4**: 228
- Magnesium chloride**
- Absorption spectra, solutions, **5**: 327, 329
- Ammine
- Decomposition pressure, **7**: 291
- Heat of decomposition, **7**: 291
- Heat of formation, **5**: 195
- Boiling point elevation in aqueous solution, **3**: 325
- Concentration cells, **6**: 326
- Decomposition pressure of hydrate, **7**: 291
- Density, **3**: 43
- Aqueous solution, **2**: 327; **3**: 71, 108
- Diffusion in water, **5**: 66
- Electrical conductivity, **6**: 149
- Aqueous solution, **6**: 231, 233
- Free energy
- Reaction with oxygen, **7**: 291
- Reaction with water vapor, **7**: 291
- Freezing point lowering of aqueous solution, **4**: 257
- Heat of formation, **5**: 195
- Heat of fusion, **5**: 131
- Hydrolysis constant, **7**: 291
- Magnetic susceptibility, **6**: 359
- Phase-equilibrium diagram, aqueous solution, **2**: 327
- Refractive index, aqueous solution, **7**: 71
- Solubility in water, **4**: 228, 246
- Specific heat, **5**: 99; **7**: 291
- Aqueous solution, **2**: 328; **5**: 123
- Surface tension, aqueous solution, **4**: 465
- Thermal conductivity, aqueous solution, **5**: 229
- Transference number, **6**: 310, 311
- Vapor pressure, aqueous solution, **3**: 367
- Vapor pressure lowering of aqueous solution, **3**: 295
- Viscosity, aqueous solution, **2**: 328; **5**: 14
- X-rays, absorption coefficient, **6**: 13
- Aluminum chloride*
- Ammonium chloride*
- Ammonium chloride*-Potassium chloride
- Barium chloride*
- Barium chloride*-Potassium chloride
- Barium nitrate*-Strontium nitrate
- Barium sulfate*
- Cadmium chloride*
- Calcium chloride*
- Calcium chloride*-Potassium chloride-Sodium chloride
- Calcium chloride*-Potassium chloride-Sodium sulfate
- Calcium chloride*-Sodium nitrate-Strontium chloride
- Calcium sulfate*
- Calcium sulfate*-Potassium chloride-Sodium chloride
- Cobaltous chloride*
- Cupric chloride*
- Cuprous chloride*
- Ethyl alcohol*
- Ferrous chloride*-Potassium chloride
- Hydrogen chloride*
- Lead chloride*
- Lithium chloride*
- Magnesium oxide
- Freezing point-solubility in water, **4**: 309
- Magnesium sulfate
- Freezing point-solubility, **4**: 62
- Freezing point-solubility in water, **4**: 278

* Data for system will be found under this compound in Index. Full explanation on page vii.

Magnesium chloride.—(Continued)

- Manganous chloride*
Freezing point-solubility, **4**: 60
- Mercuric chloride*
Freezing point-solubility in water, **4**: 305
- Phthalic acid*
Density, aqueous solution, **3**: 102
Freezing point-solubility in water, **4**: 419
- Potassium chloride*
Freezing point-solubility, **4**: 63
Freezing point-solubility in water, **4**: 310, 386
- Potassium chloride-Sodium chloride*
Freezing point-solubility, **4**: 75, 81
Freezing point-solubility in water, **4**: 310
- Potassium chloride-Sodium sulfate*
Freezing point-solubility in water, **4**: 282, 382, 383
- Potassium dichromate*
Density, aqueous solution, **3**: 98
- Potassium sulfate*
Freezing point-solubility in water, **4**: 284, 383
- Silver chloride*
Freezing point-solubility, **4**: 58
- Sodium carbonate*
Freezing point-solubility in water, **4**: 300
- Sodium chloride*
Freezing point-solubility, **4**: 63
Freezing point-solubility in water, **4**: 310
- Sodium nitrate*
Viscosity, aqueous solution, **5**: 19
- Sodium sulfate*
Freezing point-solubility in water, **4**: 280, 382, 383
- Stannous chloride*
Freezing point-solubility, **4**: 49
- Strontium chloride*
Freezing point-solubility, **4**: 62
- Strontium sulfate*
Solubility in water, **7**: 343
- Sulfuric acid*
Density, aqueous solution, **3**: 96
- Thallium monochloride*
Freezing point-solubility, **4**: 53
Solubility in water, **7**: 320
- Zinc chloride*
Freezing point-solubility, **4**: 54

Magnesium chlorostannate

- Density, **1**: 142
- Refractive index, **1**: 142, 166

Magnesium chromate

- Density, **1**: 142
- Aqueous solution, **3**: 72, 105
- Electrical conductivity, aqueous solution, **6**: 245, 254
- Optical rotatory power, **7**: 353
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 142, 170; **7**: 23
- Aqueous solution, **7**: 72
- Dispersion, **7**: 101
- Solubility in water, **4**: 229
- Viscosity, aqueous solution, **5**: 14

Magnesium cinnamate, solubility in water, **4**: 229**Magnesium cyanide**, heat of formation, **5**: 195**Magnesium cyanoplatinate**

- Electrical conductivity, aqueous solution, **6**: 245
- Refractive index, **7**: 23
- Thermal conductivity, **5**: 232

Magnesium cyanoplatinite

- Luminescence, **5**: 389

Magnesium dithionate

- Heat of formation, **5**: 195
- Solubility in water, **4**: 228

Magnesium ethyl sulfate

- Magnetic susceptibility, **6**: 359

Magnesium ferrocyanide

- Electrical conductivity, aqueous solution, **6**: 245
- Osmotic pressure, **4**: 431

Magnesium fluoride

- Band spectra, **5**: 415
- Electrical conductivity, aqueous solution, **6**: 258

- Heat of formation, **5**: 195

- X-ray diffraction data, **1**: 344

-Barium fluoride*-Calcium fluoride**-Calcium fluoride*****-Lithium fluoride*****-Magnesium phosphate**

- Freezing point-solubility, **4**: 62

Magnesium fluosilicate

- Density, **1**: 142
- Refractive index, **1**: 142, 166; **7**: 23

Magnesium formate

- Density, aqueous solution, **3**: 72
- Electrical conductivity, aqueous solution, **6**: 245

- Surface tension, aqueous solution, **4**: 465

Magnesium germanate

- Solubility in water, **4**: 229

Magnesium hydride, band spectra, **5**: 415**Magnesium hydrogen arsenate**

- Heat of formation, **5**: 195

Magnesium hydrogen phosphate

- Heat of formation, **5**: 195

-Phosphoric acid

- Density, aqueous solution, **3**: 97

Magnesium hydrogen sulfate, vapor pressure lowering in aqueous solution, **3**: 295**Magnesium hydrosulfide**

- Heat of formation, **5**: 195

Magnesium hydroxide

- Decomposition pressure, **7**: 291
- Electrical conductivity, aqueous solution, **6**: 258

- Heat of formation, **5**: 195

- Refractive index, **7**: 23

- Solubility in aqueous solutions, **7**: 339

- Solution velocity in acids, **5**: 58

- X-ray diffraction data, **1**: 344

See also Brucite.**-Acetic acid*****Magnesium iodate**

- Density, aqueous solution, **3**: 105
- Electrical conductivity, aqueous solution, **6**: 245

- Solubility in water, **4**: 228

Magnesium iodide**Ammonium**

- Decomposition pressure, **7**: 292

- Heat of decomposition, **7**: 292

- Heat of formation, **5**: 195

- Density, aqueous solution, **3**: 72

- Electrical conductivity, aqueous solution, **6**: 235, 239

- Heat of formation, **5**: 195

- Solubility in water, **4**: 228

- Transference number, **6**: 311

-Acetal***-Acetamide*****-Acetic acid*****-Acetone*****-Acetonitrile*****-Aniline*****-Benzaldehyde*****-Ethyl acetate*****-Ethyl alcohol*****-Ethyl ether*****-Ethyl formate*****-Isoamyl acetate*****Magnesium iodide.**—(Continued)**-Isobutyl acetate*****-Isopropyl alcohol*****-Methyl acetate**

- Freezing point-solubility, **4**: 204

-Methyl alcohol

- Freezing point-solubility, **4**: 203

-Propyl acetate

- Freezing point-solubility, **4**: 204

-Urethan

- Freezing point-solubility, **4**: 204

Magnesium malate

- Refractive index, **7**: 23

- Solubility in water, **4**: 229

Magnesium mercuric bromide

- Heat of formation, **5**: 196

Magnesium mercuric cyanide

- Heat of formation, **5**: 196

Magnesium metasilicate

- Decomposition temperature, **4**: 84

- Specific heat, **2**: 101

See also Clinoenstatite, Enstatite.**-Calcium metasilicate*****-Manganese metasilicate**

- Freezing point-solubility, **4**: 85

Magnesium naphthalene-1, 5-disulfonate

- Crystallography, **1**: 321

- Density, **1**: 142

- Refractive index, **1**: 142, 171

Magnesium nitrate

- Absorption spectra, solutions, **5**: 327, 329

- Density, aqueous solution, **3**: 72, 108

- Diffusion in water, **5**: 66

- Electrical conductivity, aqueous solution, **6**: 238, 240

- Freezing point lowering of aqueous solution, **4**: 257

- Heat of formation, **5**: 195

- Heat of fusion, **5**: 131

- Refractive index, aqueous solution, **7**: 71

- Solubility in water, **4**: 228

- Specific heat, **5**: 99

- Aqueous solution, **5**: 123

- Vapor pressure lowering in aqueous solution, **3**: 295

- Viscosity, aqueous solution, **5**: 14

-Barium bromate***-Calcium nitrate*-Sodium chloride****-Calcium sulfate*****-Magnesium sulfate**

- Freezing point-solubility in water, **4**: 324

-Neodymium nitrate

- Freezing point-solubility in water, **4**: 363

-Nitric acid

- Density, aqueous solution, **3**: 97

-Potassium chloride-Potassium nitrate-Strontium nitrate

- Viscosity, aqueous solution, **5**: 19

-Potassium nitrate

- Viscosity, aqueous solution, **5**: 19

-Potassium nitrate-Sodium chloride-Strontium chloride

- Viscosity, aqueous solution, **5**: 19

-Praseodymium nitrate

- Freezing point-solubility in water, **4**: 363

-Silver bromate

- Solubility in water, **7**: 322

-Silver sulfate

- Density, aqueous solution, **3**: 98

- Solubility in water, **7**: 325

-Sodium chloride

- Viscosity, aqueous solution, **5**: 19

-Sodium nitrate

- Freezing point-solubility in water, **4**: 363

-Sulfuric acid

- Density, aqueous solution, **3**: 96

* Data for system will be found under this compound in Index. Full explanation on page vii.

Magnesium nitrideHeat of formation, **5**: 195**Magnesium orthoborate**Density, **1**: 142Refractive index, **1**: 142, 172**Magnesium orthosilicate**Melting point, **4**: 84*See also* Fosterite.*-Anorthite***-Diopside***-Manganese orthosilicate*Freezing point-solubility, **4**: 85**Magnesium oxalate**Electrical conductivity, aqueous solution, **6**: 241, 245, 257Solubility in water, **6**: 257*-Hydrogen chloride***-Magnesium sulfate*Solubility in water, **7**: 340**Magnesium oxide**Albedo, **5**: 262, 263Compressibility, **3**: 50Decomposition pressure, **7**: 291Density, **2**: 82Drying agent, value as, **3**: 385Electrical conductivity, **6**: 149, 154Electrons, thermal emission of, **6**: 54Entropy, **5**: 91Fusion temperature, **2**: 83Heat content, **5**: 91Heat of formation, **5**: 195Hydrochloric acid, reaction with, **7**: 291Luminescence, **5**: 389Magnetic susceptibility, **6**: 359Melting point, **4**: 84Rubber vulcanization, use in, **2**: 283Specific heat, **2**: 85; **5**: 91, 98; **7**: 291Sublimation pressure, **7**: 291Thermal conductivity, **5**: 217Thermal expansion, **2**: 83; **3**: 43Thermionic work function, **6**: 54Thermodynamic potential, **5**: 91X-ray diffraction data, **1**: 344*See also* Periclase.*-Acetic acid***-Aluminum oxide***-Aluminum oxide*-Calcium oxide**-Aluminum oxide*-Silica**-Calcium oxide***-Calcium oxide*-Silica**-Carbon dioxide***-Ferrous oxide*-Silica**-Magnesium chloride***-Nickel oxide*Freezing point-solubility, **4**: 85*-Pentacalcium hexaluminate*Eutectic point, **4**: 85*-Phosphoric acid*Freezing point-solubility in water, **4**: 369*-Potassium fluoride-Sodium fluoride*Freezing point-solubility, **4**: 75*-Silica*Freezing point-solubility, **4**: 85, 86**Magnesium oxychloride**, heat of formation, **5**: 195**Magnesium perchlorate**Drying agent, value as, **3**: 385*-Acetone***-Butyl alcohol***-Ethyl acetate***-Ethyl alcohol***-Ethyl ether***-Isobutyl alcohol***-Methyl alcohol*Density, **3**: 140*-Propyl alcohol*Density, **3**: 140**Magnesium phosphate**Heat of formation, **5**: 195Reflectivity, selective, **5**: 260**Magnesium phosphate.—(Continued)***-Magnesium fluoride****Magnesium platincyanide**Dehydration behavior of hydrate, **7**: 293Refractive index, **7**: 23**Magnesium potassium chloride**Decomposition pressure of hydrate, **7**: 307Heat of formation, **5**: 206*-Potassium chloride*Density, **3**: 135**Magnesium potassium selenate**Density, **1**: 158Refractive index, **1**: 158, 169; **7**: 32**Magnesium potassium sulfate**Density, **3**: 44Aqueous solution, **3**: 92Heat of formation, **5**: 206

Hydrate

Decomposition pressure, **7**: 309Heat of decomposition, **7**: 309Refractive index, **7**: 31Specific heat, **5**: 101**Magnesium pyrophosphate**Density, **1**: 141Refractive index, **1**: 141, 171**Magnesium rubidium chromate**Density, **1**: 160Refractive index, **1**: 160, 171; **7**: 32**Magnesium rubidium selenate**Density, **1**: 160Refractive index, **1**: 160, 169; **7**: 32**Magnesium rubidium sulfate**Density, **1**: 160; **3**: 44

Hydrate

Decomposition pressure, **7**: 310Heat of decomposition, **7**: 310Refractive index, **1**: 160, 168; **7**: 31Solubility in water, **4**: 243**Magnesium selenate**Density, **1**: 141Electrical conductivity, aqueous solution, **6**: 245Refractive index, **1**: 141, 169**Magnesium silicate**Heat of formation, **5**: 196Thermal conductivity, **5**: 217*-Anorthite***-Diopside****Magnesium sodium sulfate**Density, aqueous solution, **3**: 86Solubility in water, **4**: 239**Magnesium succinate**Solubility in water, **4**: 229*-Barium succinate***-Calcium succinate****Magnesium sulfate**Absorption spectra, solutions, **5**: 327Adsorption by charcoal, **3**: 252Boiling point elevation in aqueous solution, **3**: 325Compressibility, aqueous solution, **3**: 439Decomposition pressure of hydrates, **7**: 292Density, **1**: 141; **3**: 44Aqueous solution, **3**: 72, 108Dielectric constant, **6**: 100Diffusion in water, **5**: 66Electrical conductivity, aqueous solution, **6**: 231, 236, 240Freezing mixtures, use in, **1**: 64Freezing point lowering of aqueous solution, **4**: 257Heat of formation, **5**: 195Magnetic susceptibility, **6**: 359Aqueous solution, **6**: 364Optical rotatory power, **7**: 353Reflectivity, selective, **5**: 260Refractive index, **1**: 141, 169Aqueous solution, **7**: 71**Magnesium sulfate.—(Continued)**Solubility in water, **4**: 228Solution velocity in water, **5**: 56, 59Specific heat, **5**: 99Aqueous solution, **5**: 123Surface tension, aqueous solution, **4**: 465Thermal conductivity, **5**: 217Aqueous solution, **5**: 229Transference number, **6**: 310Vapor pressure lowering in aqueous solution, **3**: 295Verdet constant, aqueous solution, **6**: 427Viscosity, aqueous solution, **5**: 14*-Ammonium sulfate***-Ammonium sulfate*-Ferrous sulfate**-Ammonium sulfate*-Potassium sulfate**-Calcium chloride***-Calcium nitrate***-Calcium selenate***-Calcium sulfate***-Calcium sulfate*-Potassium sulfate**-Ferric chloride***-Ferrous sulfate***-Hydrogen chloride***-Magnesium chloride***-Magnesium nitrate***-Magnesium oxalate***-Nitric acid*Density, aqueous solution, **3**: 97*-Potassium chloride*Freezing point-solubility in water, **4**: 284, 383*-Potassium chloride-Sodium chloride*Freezing point-solubility in water, **4**: 282, 382, 383*-Potassium sulfate*Density, aqueous solution, **3**: 98Freezing point-solubility, **4**: 63Freezing point-solubility in water, **4**: 352, 391*-Potassium sulfate-Sodium sulfate*Freezing point-solubility in water, **4**: 351, 390, 391*-Silver bromate*Solubility in water, **7**: 322*-Silver sulfate*Density, aqueous solution, **3**: 98Solubility in water, **7**: 325*-Sodium carbonate*Freezing point-solubility in water, **4**: 334*-Sodium chloride*Freezing point-solubility in water, **4**: 280, 382, 383*-Sodium sulfate*Density, aqueous solution, **3**: 98Freezing point-solubility, **4**: 63, 79Freezing point-solubility in water, **4**: 349, 391*-Sulfuric acid*Density, aqueous solution, **3**: 96Freezing point-solubility, **4**: 43*-Thallium monochloride*Solubility in water, **7**: 320*-Zinc sulfate*Freezing point-solubility in water, **4**: 338, 389**Magnesium sulfide**Heat of formation, **5**: 195X-ray diffraction data, **1**: 344**Magnesium sulfite**, heat of formation, **5**: 195**Magnesium tartrate**Solubility in water, **4**: 229**Magnesium thallium selenate**Refractive index, **7**: 32**Magnesium thallium sulfate**Refractive index, **7**: 31**Magnesium thiosulfate**, electrical conductivity, aqueous solution, **6**: 245

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Magnesium titanate**
See Geikielite.
- Magnet steels**, magnetic properties, **6**: 385
- Magnetic elements**, **6**: 346
Terrestrial, **6**: 446
- Magnetic field**
Dielectric constant, effect on, **6**: 105
Electrical conductivity, effect on, **6**: 421
Hall effect, effect on, **6**: 418
Intensity, conversion factors, **1**: 29
Thermal conductivity, effect on, **6**: 226
Thermoelectric properties, effect on, **6**: 226
Young's modulus, effect on, **6**: 440
- Magnetic flux**, conversion factors, **1**: 30
- Magnetic induction**
Conversion factors, **1**: 30
Definition, **1**: 38
Flux, conversion factors, **1**: 30
- Magnetic moment**
Electrons, relation to, **6**: 348
Ions, **6**: 351
- Magnetic permeability**
Conversion factors, **1**: 21
- Magnetic poles**, **6**: 445
- Magnetic potential**
Conversion factors, **1**: 30
- Magnetic potential gradient**
Conversion factors, **1**: 29
- Magnetic reluctance**
Conversion factors, **1**: 30
- Magnetic rotatory power**, **6**: 425
- Magnetic susceptibility**
Additive relations, **6**: 349
Atomic number, relation of, **6**: 348
Atoms, values for, **6**: 349, 365
Conversion factors, **1**: 21
Glass, **2**: 101
Pascal's relation, **6**: 349
- Magnetic units**, fundamental, **1**: 30
- Magnetism**, **6**: 345
Quantity of, **1**: 40
Terrestrial, **6**: 445
Theories of, **6**: 345
- Magnetite**
Compressibility, **3**: 50
Curie point, **6**: 410
Density, **1**: 128
Electrical conductivity, **6**: 154, 155
Joule effect, **6**: 440
Kerr constant, **6**: 435
Magnetic properties, **6**: 374, 376, 410
Melting point, **1**: 128
Rotation by magnetization, **6**: 347
Thermal expansion, **3**: 43
Transmission of radiant energy, **5**: 270
See also Ferroso-ferric oxide.
- Magnetization**
Intensity of
Conversion factors, **1**: 30
Definition, **1**: 38
Rotation, production by, **6**: 347
- Magnetomotive force**
Conversion factors, **1**: 30
- Magnetons**, **6**: 346
- Magneto-optics**, **6**: 425
- Magnetophone**, **6**: 457
- Magnetostriction**, **6**: 439
- Magnitude**
Absolute, definition, **1**: 39
Apparent, definition, **1**: 39
- Magno (alloy)**, **2**: 378; cf. 473, 482
Electrical conductivity, **6**: 194
- Magno-nickel**, **2**: 378; cf. 473, 482
- Magnolia metal**, **2**: 378; cf. 557
- Mahogany wood**
Density, **2**: 313
Thermal conductivity, **2**: 313
- Maillehort (alloy)**, **2**: 378, 480
Electrical conductivity, **6**: 171
- Major metal**, **2**: 378
- Malacca**, weights and measures, **1**: 9
- Malachite**
Density, **1**: 123
Dielectric constant, **6**: 99
Emission, spectral, **5**: 259
Free energy and heat of solution in carbonic acid, **7**: 265
Reflectivity, selective, **5**: 260
Refractive index, **1**: 123, 173
Solubility in carbonic acid, **7**: 265
Solution velocity in acids, **5**: 58, 59
Specific heat, **5**: 97
- Malachite green**, refractive index, **7**: 12, 15
- Malamic acid**
Electrical conductivity, aqueous solution, **6**: 267
Optical rotatory power, **7**: 371
- Maleic acid**
Absorption spectra, **5**: 336, 375
Density, aqueous solution, **3**: 112, 114
Electrical conductivity, aqueous solution, **6**: 265
Heat of combustion, **5**: 165
Heat of solution in water, **5**: 148
Magnetic susceptibility, **6**: 361
Solubility in water, **4**: 251
Surface tension, aqueous solution, **4**: 468
Verdet constant, **6**: 428
-Acetone*
-Benzene*
-Carbon tetrachloride*
-Chloroform*
-Ethyl alcohol*
-Ethyl ether*
-l-Mandelic acid
Freezing point-solubility, **4**: 113
-Methyl alcohol
Viscosity, **5**: 34
-Xylene
Freezing point-solubility, **4**: 113
- Maleic anhydride**
Absorption spectra, **5**: 336, 373
Dielectric constant, **6**: 86
Heat of combustion, **5**: 166
Magnetic susceptibility, **6**: 361
Refractive index, **7**: 29
Vapor pressure, **3**: 218
Verdet constant, **6**: 428
- Malic acid**
Absorption spectra, **5**: 332, 337
Density, aqueous solution, **3**: 112, 114; **7**: 68
Electrical conductivity, aqueous solution, **6**: 267
Heat of combustion, **5**: 165
Heat of solution in water, **5**: 149
Optical rotatory power, **7**: 369
Refractive index, aqueous solution, **7**: 68
Solubility in water, **4**: 251
Surface tension, aqueous solution, **4**: 468
-Acetone*
-Ammonium malate*
-Cupric hydroxide*
-Ethyl alcohol*
-Ethyl ether*
-Methyl alcohol
Density, **3**: 151
-Molybdenum trioxide
Density, aqueous solution, **3**: 102
Refractive index, aqueous solution, **7**: 94
-Potassium malate
Density, aqueous solution, **3**: 103
-Propyl alcohol
Density, **3**: 164
-Sodium malate
Density, aqueous solution, **3**: 102
-Sulfuric acid
Density, aqueous solution, **3**: 101
- Mallet alloy**, **2**: 379; cf. 465, 546
- Malloydium (alloy)**, **2**: 379; cf. 480
- Malonamide**
Absorption spectra, **5**: 336
Boiling point elevation in aqueous solution, **3**: 327
Heat of combustion, **5**: 167
-Ethyl alcohol*
- Malonic acid**
Absorption spectra, **5**: 336
Decomposition, kinetics of, **7**: 122
Density, aqueous solution, **3**: 112, 113
Electrical conductivity, aqueous solution, **6**: 264
Heat of combustion, **5**: 165
Heat of solution in water, **5**: 148
Solubility in water, **4**: 251, 253
Specific heat, **5**: 102
Substituted, decomposition, kinetics of, **7**: 122
Surface tension, aqueous solution, **4**: 467
Transition temperature, **4**: 8
Verdet constant, **6**: 428
-Ethyl ether*
-Hydrogen chloride*
-o-Nitrobenzoic acid
Freezing point-solubility in water, **4**: 411
-Salicylic acid
Freezing point-solubility in water, **4**: 411
-Sulfuric acid
Freezing point-solubility in water, **4**: 398
- Malononitrile**
Density, **3**: 28
Dielectric constant, **6**: 85
Electrical conductivity, aqueous solution, **6**: 263
Heat of combustion, **5**: 167
Refractive index, **7**: 35
Surface tension, **4**: 449
Viscosity, **7**: 214
- Malta**, weights and measures, **1**: 9
- Maltase**, **7**: 155
- Maltose**
Absorption spectra, **5**: 333
Density, aqueous solution, **2**: 347
Diffusion in water, **5**: 71
Freezing point lowering, **2**: 347
Freezing point lowering of aqueous solution, **4**: 263
Heat of combustion, **5**: 166
Hydrolysis by enzymes, **7**: 155
Optical rotation, **2**: 346
Refractive index, aqueous solutions, **2**: 347
Solubility in aqueous acetone, **3**: 406
Solubility in aqueous ethyl alcohol, **4**: 405
Solubility in water, **2**: 347; **4**: 253
Specific heat, **5**: 104
Aqueous solution, **5**: 125
Verdet constant, **6**: 430
Viscosity, aqueous solution, **5**: 23
- Maltose derivatives**
Optical rotatory power, **7**: 399
- Maltose octoacetate**
Heat of combustion, **5**: 167
- Maluminum (alloy)**, **2**: 379
- Manandonite**
Density, **1**: 150
Refractive index, **1**: 150, 171
- Mandelic acid**
Absorption spectra, **5**: 343
Boiling point elevation in aqueous solution, **3**: 327
Electrical conductivity, aqueous solution, **6**: 286
Heat of combustion, **5**: 165
Heat of solution in water, **5**: 150

Mandelic acid.—(Continued)

- Optical rotatory power, **7**: 366
- Solubility in water, **4**: 253
- Viscosity, aqueous solution, **5**: 21
- Acetic acid*
- Acetone*
- Anisole*
- Benzene*
- Dimethylpyrone*
- Ethyl ether*
- Formic acid*
- Hydrogen chloride*
- Isoamyl acetate*
- Maleic acid*
- Molybdenum trioxide
- Density, aqueous solution, **3**: 102
- Sulfuric acid
- Freezing point-solubility in water, **4**: 398

d-Mandelic acid

- l-Mandelic acid
- Freezing point-solubility, **4**: 153

Mandelonitrile

- Absorption spectra, **5**: 342
- Dielectric absorption, **6**: 93
- Dielectric constant, **6**: 93
- Surface tension, **4**: 457

Mangaloy (alloy), 2: 379

- Electrical conductivity, **6**: 196

Manganate ion, electrode potential, 7: 274**Manganese**

- Absorption, index of, **5**: 249
- Boiling point, **1**: 102; **3**: 205
- Cathodoluminescence, **5**: 390
- Compressibility, **3**: 47
- Critical potentials, **6**: 71
- Density, **1**: 104; **2**: 456
- Diffusion in copper, **5**: 77
- Electrical conductivity, **1**: 104; **6**: 136
- Electrode potentials, **7**: 274
- Electronic structure, normal and excited, **6**: 71
- Emission, spectral, **5**: 242
- Emission spectra, **5**: 303
- Hall effect, **6**: 416
- Heat of fusion, **1**: 104
- Heat of transformation, **2**: 458
- Heat of transition, **5**: 190
- Heat of vaporization, **1**: 102
- Isotopes, **1**: 47
- Magnetic susceptibility, **6**: 355
- Melting point, **1**: 104
- Nernst effect, **6**: 420
- Persistent lines, **5**: 323
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 249
- Specific heat, **5**: 93
- Spectral series, **5**: 400
- Thermal expansion, **1**: 104; **2**: 461
- Thermochemistry, **5**: 190
- Vapor pressure, **3**: 205
- X-ray absorption limits, **6**: 36, 44
- X-ray absorption spectra, **6**: 36
- X-ray crystal structure, **1**: 340
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption coefficient, **6**: 13
- Zeeman effect, **5**: 420, 422
- Aluminum*
- Aluminum*-Cadmium-Copper-Magnesium-Zinc
- Aluminum*-Carbon-Copper-Iron
- Aluminum*-Carbon-Iron-Nickel
- Aluminum*-Copper
- Aluminum*-Copper-Iron
- Aluminum*-Copper-Iron-Silicon
- Aluminum*-Copper-Iron-Silicon-Zinc
- Aluminum*-Copper-Iron-Tin-Zinc
- Aluminum*-Copper-Magnesium
- Aluminum*-Copper-Magnesium-Nickel
- Aluminum*-Copper-Magnesium-Zinc
- Aluminum*-Copper-Silicon

Manganese.—(Continued)

- Aluminum*-Copper-Zinc
- Aluminum*-Magnesium
- Antimony*
- Arsenic*
- Arsenic*-Copper-Iron-Phosphorus
- Bismuth*
- Boron*
- Carbon*
- Carbon*-Chromium-Iron
- Carbon*-Chromium-Iron-Molybdenum-Nickel
- Carbon*-Chromium-Iron-Molybdenum-Silicon
- Carbon*-Chromium-Iron-Silicon
- Carbon*-Chromium-Iron-Silicon-Tungsten
- Carbon*-Cobalt-Iron-Silicon
- Carbon*-Copper-Iron
- Carbon*-Copper-Iron-Nickel
- Carbon*-Copper-Iron-Silicon
- Carbon*-Iron
- Carbon*-Iron-Molybdenum
- Carbon*-Iron-Molybdenum-Nickel
- Carbon*-Iron-Nickel
- Carbon*-Iron-Nickel-Silicon
- Carbon*-Iron-Silicon
- Carbon*-Iron-Silicon-Tungsten
- Carbon*-Iron-Tungsten
- Chromium*-Iron-Nickel
- Chromium*-Iron-Silicon
- Cobalt*
- Copper*
- Copper*-Iron
- Copper*-Iron-Nickel
- Copper*-Iron-Nickel-Zinc
- Copper*-Iron-Silicon
- Copper*-Nickel
- Copper*-Tin
- Copper*-Zinc
- Graphite*
- Iron*
- Iron*-Molybdenum
- Iron*-Molybdenum-Nickel-Silicon
- Iron*-Nickel
- Iron*-Nickel-Silicon
- Iron*-Phosphorus
- Iron*-Silicon
- Lead*
- Magnesium*
- Mercury
- Vapor pressure, partial, **3**: 284
- Molybdenum
- Density, **2**: 594
- Nickel
- Curie point, **6**: 409
- Electrical conductivity, **6**: 194
- Equilibrium diagram, **2**: 438
- Magnetic properties, **6**: 406
- Mechanical properties, **2**: 482
- Specific heat, **5**: 121
- Thermal conductivity, **5**: 225
- Thermoelectric properties, **6**: 221
- Phosphorus
- Curie point, **6**: 408
- Freezing point-solubility, **4**: 29
- Magnetic properties, **6**: 408
- Silicon
- Density, **2**: 594
- Equilibrium diagram, **2**: 438
- Hardness, **2**: 593
- Silver
- Equilibrium diagram, **2**: 421
- Thallium
- Equilibrium diagram, **2**: 438
- Tin
- Kerr constant, **6**: 436
- Manganese boride**
- Kerr constant, **6**: 436
- Manganese carbide**
- Heat of formation, **5**: 190

Manganese dioxide

- Decomposition pressure, **7**: 276
- Heat of formation, **5**: 190
- Magnetic susceptibility, **6**: 357
- Photoelectric current, **6**: 69
- Specific heat, **5**: 97
- See also Pyrolusite.
- Cupric oxide*
- Lead dioxide*
- Potassium bromide
- Electrical conductivity, **6**: 151

Manganese disulfide

- Photoelectric current, **6**: 69
- Thermal expansion, **3**: 44
- See also Hauerite.

Manganese fluosilicate

- Density, **1**: 128
- Aqueous solution, **3**: 104
- Refractive index, **1**: 128, 166; **7**: 21

Manganese hydride

- Magnetic properties, **6**: 408, 409

Manganese metasilicate

- Density, **1**: 128
- Melting point, **1**: 128; **4**: 84
- Refractive index, **1**: 128, 165
- See also Rhodonite.

-Calcium metasilicate***-Magnesium metasilicate*****-Manganese metatitanate**

- Freezing point-solubility, **4**: 85

Manganese nickel steel

- Electrical conductivity, **6**: 186

Manganese nitride

- Heat of formation, **5**: 190
- Magnetic susceptibility, **6**: 357

Manganese orthosilicate

- Decomposition of, **4**: 84
- See also Tephroite.

-Calcium orthosilicate***-Magnesium orthosilicate*****Manganese perchloride**

- Absorption spectra, solutions, **5**: 328

Manganese pyrophosphate

- Density, **1**: 127
- Refractive index, **1**: 127, 172

Manganese sesquiborate

- Density, **1**: 136
- Refractive index, **1**: 136, 172

Manganese silicate

- Heat of formation, **5**: 190
- Diopside*
- Manganous sulfide
- Freezing point-solubility, **4**: 60
- Manganese titanate
- Freezing point-solubility, **4**: 60
- Manganese steel**
- Electrical conductivity, **6**: 181, 182
- Heat treatment, effect of, **6**: 200
- Magnetic properties, **6**: 386, 392-393
- Mechanical properties, **2**: 520, 522
- Cooling medium, effect of, **2**: 522
- Liquid air temperature, effect of, **2**: 522
- Thermal conductivity, **5**: 225
- Thermal expansion, **2**: 471
- Thermoelectric properties, **6**: 223

Manganese titanate**-Manganese silicate*****Manganese trifluoride**

- Heat of formation, **5**: 190

Manganese tungsten steel

- Electrical conductivity, **6**: 189

Manganic acid, electrical conductivity, aqueous solution, 6: 244**Manganic hydroxide**

- Heat of formation, **5**: 190
- X-ray diffraction data, **1**: 342

Manganic oxide

- Decomposition pressure, **7**: 276
- Heat of formation, **5**: 190
- Magnetic susceptibility, **6**: 357

Manganic oxide.—(Continued)

- Specific heat, **5**: 97
 Thermoelectric power, **6**: 224
 X-ray diffraction data, **1**: 342
- Manganic phosphate**
 Heat of formation, **5**: 190
- Manganic potassium cyanide**
 Refractive index, **1**: 157, 174
- Manganic selenate**
 Reflectivity, selective, **5**: 260
- Manganic sulfate**
 Absorption spectra, solutions, **5**: 328
- Manganic sulfide**
 X-ray diffraction data, **1**: 342
- Manganin** (alloy), **2**: 379
 Electrical conductivity, **6**: 168
 Magnetic field, effect of, **6**: 422
 Hall effect, **6**: 417
 Specific heat, **5**: 121
 Thermal conductivity, **5**: 224
 Thermoelectric properties, **6**: 219, 225
 Thomson coefficient, **6**: 228
- Manganite**
 Density, **1**: 127
 Refractive index, **1**: 127, 174
See also Manganic oxide.
- Mangan-Neusilber**, **2**: 379
- Mangano-manganic oxide**
 Electrical conductivity, **6**: 153
 Emission, spectral, **5**: 242
 Heat of formation, **5**: 190
 Magnetic susceptibility, **6**: 357
 Photoelectric current, **6**: 68
 Reduction with hydrogen, **7**: 276
See also Hausmannite.
- Manganosite**
 Density, **1**: 127
 Melting point, **1**: 127
 Refractive index, **1**: 127, 165
See also Manganous oxide.
- Manganostibite**
 Refractive index, **1**: 127, 173
- Manganotantalate**
 Density, **1**: 136
 Refractive index, **1**: 136, 173
- Manganous acetate**
 Density, aqueous solution, **3**: 68
 Heat of formation, **5**: 190
 Specific heat, aqueous solution, **5**: 123
- Manganous benzoate**
 Ammine, decomposition pressure, **7**: 276
- Manganous bromide**
 Ammines
 Decomposition pressure, **7**: 275
 Heat of decomposition, **7**: 275
 Heat of formation, **5**: 190
 Decomposition pressure of hydrates, **7**: 275
 Density, aqueous solution, **3**: 67
 Electrical conductivity, aqueous solution, **6**: 234, 239
 Ethylamine complex
 Decomposition pressure, **7**: 275
 Heat of decomposition, **7**: 275
 Heat of formation, **5**: 190
 Magnetic susceptibility, **6**: 357
 Aqueous solution, **6**: 364
 Methylamine complex
 Decomposition pressure, **7**: 275
 Heat of decomposition, **7**: 275
 Refractive index, aqueous solution, **7**: 70
 Dispersion, **7**: 100
 Solubility in water, **4**: 224
 Vapor pressure of aqueous solution, **3**: 367
 -Aluminum bromide*
- Manganous carbonate**
 Carbon dioxide, reaction with, in water, **7**: 276
 Compressibility, **3**: 50

Manganous carbonate.—(Continued)

- Decomposition pressure, **7**: 276
 Heat of formation, **5**: 190
 X-ray diffraction data, **1**: 342
See also Rhodochrosite.
- Manganous chloride**
 Absorption spectra, solutions, **5**: 328
 Ammines
 Decomposition pressure, **7**: 274
 Heat of decomposition, **7**: 274
 Heat of formation, **5**: 190
 Boiling point elevation in aqueous solution, **3**: 325
 Decomposition pressure of hydrates, **7**: 274
 Density, aqueous solution, **3**: 67, 104, 107
 Diffusion in water, **5**: 65
 Electrical conductivity, aqueous solution, **6**: 231, 232
 Ethylamine complex
 Decomposition pressure, **7**: 275
 Heat of decomposition, **7**: 275
 Freezing point lowering of aqueous solution, **4**: 256
 Heat of formation, **5**: 190
 Hydration temperature, **1**: 66
 Magnetic susceptibility, **6**: 357
 Aqueous solution, **6**: 364
 Methylamine complex
 Decomposition pressure, **7**: 275
 Heat of decomposition, **7**: 275
 Refractive index, aqueous solution, **7**: 70
 Dispersion, **7**: 100
 Solubility in water, **4**: 224
 Specific heat, aqueous solution, **5**: 123
 Surface tension, aqueous solution, **4**: 464
 Transference number, **6**: 310
 Vapor pressure, aqueous solution, **3**: 367
 Vapor pressure lowering in aqueous solution, **3**: 294
 Verdet constant, aqueous solution, **6**: 428
 Viscosity, aqueous solution, **5**: 14
 X-rays, absorption coefficient, **6**: 13
 -Aluminum chloride*
 -Ammonium chloride*
 -Barium chloride*
 -Bismuth chloride*
 -Cadmium chloride*
 -Calcium chloride*
 -Cobaltous chloride*
 -Ethyl alcohol*
 -Hydrogen chloride*
 -Lead chloride*
 -Lithium chloride*
 -Magnesium chloride*
 -Manganous nitrate-Manganous sulfate
 Refractivity, aqueous solution, **7**: 98
 -Methyl alcohol
 Boiling point elevation, **3**: 334
 Magnetic susceptibility, **6**: 364
 -Potassium chloride
 Freezing point-solubility, **4**: 60
 Freezing point-solubility in water, **4**: 307, 386
 -Sodium chloride
 Freezing point-solubility, **4**: 60
 -Stannous chloride
 Freezing point-solubility, **4**: 49
 -Strontium chloride
 Freezing point-solubility, **4**: 60
 -Thallium monochloride
 Solubility in water, **7**: 320
 -Zinc chloride
 Freezing point-solubility, **4**: 54
- Manganous dithionate**
 Heat of formation, **5**: 190

Manganous fluoride

- Heat of formation, **5**: 190
 Magnetic susceptibility, **6**: 357
 Aqueous solution, **6**: 364
- Manganous formate**
 Heat of formation, **5**: 190
- Manganous hydroxide**
 Electrical conductivity, aqueous solution, **6**: 258
 Heat of formation, **5**: 190
 Magnetic susceptibility, **6**: 357
- Manganous iodide**
 Ammines
 Decomposition pressure, **7**: 275
 Heat of decomposition, **7**: 275
 Decomposition pressure of hydrates, **7**: 275
 Ethylamine complex
 Decomposition pressure, **7**: 275, 276
 Heat of decomposition, **7**: 275, 276
 Heat of formation, **5**: 190
 Magnetic susceptibility, **6**: 357
 Aqueous solution, **6**: 364
 Methylamine complex
 Decomposition pressure, **7**: 275
 Heat of decomposition, **7**: 275
 Vapor pressure, aqueous solution, **3**: 367
- Manganous lactate**, surface tension, aqueous solution, **4**: 465
- Manganous nitrate**
 Absorption spectra, solutions, **5**: 328
 Density, aqueous solution, **3**: 68, 107
 Diffusion in water, **5**: 65
 Electrical conductivity, **6**: 148
 Aqueous solution, **6**: 237, 240
 Freezing point lowering of aqueous solution, **4**: 256
 Heat of formation, **5**: 190
 Heat of fusion, **5**: 131
 Magnetic susceptibility, **6**: 357
 Aqueous solution, **6**: 364
 Refractive index, aqueous solution, **7**: 70
 Dispersion, **7**: 100
 Solubility in water, **4**: 224
 Specific heat, **5**: 97
 Aqueous solution, **5**: 123
 Vapor pressure, aqueous solution, **3**: 367
 Viscosity, aqueous solution, **5**: 14
 -Ethyl alcohol*
 -Manganous chloride*-Manganous sulfate
 -Manganous sulfate
 Refractive index, aqueous solution, **7**: 96
 -Methyl alcohol
 Magnetic susceptibility, **6**: 364
 -Neodymium nitrate
 Freezing point-solubility in water, **4**: 362
 -Praseodymium nitrate
 Freezing point-solubility in water, **4**: 362
- Manganous oxalate**
 Density, aqueous solution, **3**: 104
 Heat of formation, **5**: 190
 Solubility in water, **4**: 224
 -Ammonium oxalate*
 -Oxalic acid
 Solubility in water, **7**: 326
 -Sulfuric acid
 Solubility in water, **7**: 326
- Manganous oxide**
 Band spectra, **5**: 415
 Cathodoluminescence, **5**: 390
 Heat of formation, **5**: 190
 Magnetic susceptibility, **6**: 357
 Melting point, **4**: 84
 Photoelectric current, **6**: 68
 Specific heat, **5**: 97

* Data for system will be found under this compound in Index. Full explanation on page vii.

Manganous oxide.—(Continued)

- X-ray crystal structure, **1**: 342
See also Manganosite.
 -Aluminum oxide*-Silica
 -Aluminum oxide*-Titanium dioxide
 -Boric oxide*
 -Carbon dioxide*
 -Ferrous oxide*-Silica
 -Silica
 Freezing point-solubility, **4**: 85
 -Silica-Titanium dioxide
 Freezing point-solubility, **4**: 92
 -Titanium dioxide
 Freezing point-solubility, **4**: 85
Manganous perchlorate, decomposition pressure of hydrates, **7**: 275
Manganous potassium sulfate, decomposition pressure of hydrate, **7**: 308
Manganous rubidium selenate
 Refractive index, **7**: 31
Manganous rubidium sulfate
 Density, **1**: 160
 Hydrate
 Decomposition pressure, **7**: 310
 Heat of decomposition, **7**: 310
 Refractive index, **1**: 160, 168; **7**: 31
 Solubility in water, **4**: 243
Manganous selenide
 Heat of formation, **5**: 190
Manganous sodium sulfate
 Heat of formation, **5**: 203
Manganous sulfate
 Absorption spectra, solutions, **5**: 328
 Ammines
 Decomposition pressure, **7**: 276
 Heat of decomposition, **7**: 276
 Boiling point elevation in aqueous solution, **3**: 325
 Decomposition pressure, **7**: 276
 Density, **3**: 44
 Aqueous solution, **3**: 68, 107
 Diffusion in water, **5**: 65
 Electrical conductivity, aqueous solution, **6**: 236, 240
 Freezing point lowering of aqueous solution, **4**: 256
 Heat of formation, **5**: 190
 Hydrate
 Decomposition, **7**: 276
 Heat of decomposition, **7**: 276
 Magnetic susceptibility, **6**: 357
 Aqueous solution, **6**: 364
 Refractive index, aqueous solution, **7**: 70
 Solubility in aqueous ethyl alcohol, **3**: 404
 Solubility in water, **4**: 224, 246
 Specific heat, **5**: 97
 Aqueous solution, **5**: 123
 Surface tension, aqueous solution, **4**: 464
 Transition temperature, **4**: 7
 Vapor pressure, aqueous solution, **3**: 367
 Vapor pressure lowering in aqueous solution, **3**: 294
 Verdet constant, aqueous solution, **6**: 427, 428
 Viscosity, aqueous solution, **5**: 14
 -Ammonium sulfate*
 -Cupric sulfate*
 -Ethyl alcohol*
 -Ferric sulfate*
 -Lithium sulfate*
 -Manganous chloride*-Manganous nitrate
 -Manganous nitrate*
 -Potassium sulfate
 Density, aqueous solution, **3**: 98
 Freezing point-solubility, **4**: 60
 Freezing point-solubility in water, **4**: 342
 Viscosity, aqueous solution, **5**: 19

Manganous sulfate.—(Continued)

- Sodium sulfate
 Density, aqueous solution, **3**: 98
 Freezing point-solubility, **4**: 60
 Freezing point-solubility in water, **4**: 341
 Viscosity, aqueous solution, **5**: 19
 -Zinc sulfate
 Density, aqueous solution, **3**: 98
 Freezing point-solubility in water, **4**: 338, 389
Manganous sulfide
 Heat of formation, **5**: 190
 Magnetic susceptibility, **6**: 357
 Photoelectric current, **6**: 69
 Specific heat, **5**: 97
 Thermal expansion, **3**: 44
 X-ray diffraction data, **1**: 342
 -Manganese silicate*
Manganous thallium selenate
 Refractive index, **7**: 31
Manganous thallium sulfate
 Refractive index, **7**: 31
Mangostin
 -Pyridine
 Boiling point elevation, **3**: 342
Manhardts alloy, **2**: 379
Manila paper
 Density, **2**: 311
 Dielectric constant, **2**: 310
 Dielectric strength, **2**: 310
 Electrical conductivity, **2**: 310
 Moisture content at various humidities, **2**: 323
 Power factor, **2**: 310
 Tensile strength, **2**: 311
Mannheim gold, **2**: 379; *cf.* 556, 561, 563, 565
Mannitoboric acid
 -Acetone*
Mannitol
 Absorption spectra, **5**: 332
 Boiling point elevation in aqueous solution, **3**: 327
 Crystallography, **1**: 326
 Density, aqueous solution, **3**: 114
 Dielectric constant, **6**: 91
 Aqueous solution, **6**: 101
 Diffusion in water, **5**: 71
 Electrical conductivity, aqueous solution, **6**: 277
 Freezing point lowering of aqueous solution, **4**: 263
 Heat of combustion, **5**: 164
 Heat of dilution with water, **5**: 161
 Heat of solution in water, **5**: 150
 Osmotic pressure, **4**: 430
 Refractive index, aqueous solution, **7**: 69
 Solubility in water, **4**: 251, 252
 Pressure, effect of, **4**: 265
 Specific heat, **5**: 103
 Aqueous solution, **5**: 125
 Surface tension, aqueous solution, **4**: 469
 Vapor pressure lowering in aqueous solution, **3**: 293
 Verdet constant, **6**: 429
 -Ammonia*
 -Boric acid*
 -Lead chloride*
 -Potassium sulfate
 Freezing point-solubility in water, **4**: 418
Mannitol derivatives
 Optical rotatory power, **7**: 388
Mannoheptose
 Optical rotatory power, **7**: 398
Mannolactone
 Heat of combustion, **5**: 166

Mannonic acid

- Optical rotatory power, **7**: 397
Mannose
 Electrical conductivity, aqueous solution, **6**: 277
 Mutarotation, **2**: 351
 Optical rotation, **2**: 350
 Solubility in alcohols, **2**: 351
 Solubility in aqueous ethyl alcohol, **4**: 405
Mannose derivatives
 Optical rotatory power, **7**: 394
Manometers, corrections for, **1**: 68
Manometry, **1**: 68
Maple wood
 Density, **2**: 314
 Thermal conductivity, **2**: 314
See also Woods.
Marble
 Bulk density, **2**: 52
 Compressibility, **2**: 54; **3**: 51
 Compressive strength, **2**: 48
 Density, **2**: 311
 Dielectric constant, **2**: 310; **6**: 99
 Dielectric strength, **2**: 310
 Elasticity, **2**: 52
 Electrical conductivity, **2**: 310; **6**: 154
 Hardness, **2**: 50
 Impact hardness, **2**: 51
 Magnetic susceptibility, **6**: 364
 Porosity, **2**: 53
 Power factor, **2**: 310
 Residual rays, **5**: 261
 Shearing strength, **2**: 48
 Solution velocity in acids, **5**: 58
 Sound, velocity of, in, **6**: 466
 Specific heat, **5**: 99
 Strength properties, **2**: 311
 Tensile strength, **2**: 49
 Thermal conductivity, **2**: 55, 311
 Thermal diffusivity, **2**: 56, 316
 Thermal expansion, **2**: 54, 311
 Transverse strength, **2**: 49
Marcasite
 Compressibility, **3**: 50
 Density, **1**: 128
 Electrical conductivity, **6**: 154
 Transformation temperature, **1**: 128
See also Iron disulfide.
Margarite
 Density, **1**: 145
 Refractive index, **1**: 145, 171
Margaronitrile
 "Surface vapor pressure," **4**: 476
Marialite
 Density, **1**: 153
 Refractive index, **1**: 153, 166; **7**: 27
Marine babbitt, **2**: 379
Markus alloy, **2**: 379
Marrubic acid
 Optical rotatory power, **7**: 467
Mars, characteristics, **1**: 392
Marsh's patent (alloy), **2**: 379
Marshite
 Boiling point, **1**: 122, 163
 Density, **1**: 122
 Refractive index, **1**: 122, 165
See also Cuprous iodide.
Martensite, magnetic properties, **6**: 380
Marties' alloy, **2**: 379
Martin Assailly steel
 Electrical conductivity, **6**: 200
Martin steel, **2**: 379; *cf.* 492, 523, 602
Martinite
 Density, **1**: 143
 Refractive index, **1**: 143, 171
Mascagnite. *See* Ammonium sulfate.
Masonry
 Acoustic absorption, **6**: 459
 Crushing strength, **2**: 66
 Density, **2**: 314

* Data for system will be found under this compound in Index. Full explanation on page vii.

Masonry.—(Continued)

- Sound, transmission of, by, **6**: 459
- Strength, **2**: 124
- Thermal conductivity, **2**: 314
- Thermal radiations from, **5**: 244

Mass

- Astronomical unit, **1**: 34
- Conversion factors, **1**: 20
- Secondary units, **1**: 2

Massicotite

- Density, **1**: 115
- Refractive index, **1**: 115, 174
- See also Lead oxide.

Masurium, melting point, **1**: 104**Mathesius metal**, **2**: 379; cf. 556**Matildite**, density, **1**: 124**Matlockite**

- Density, **1**: 115
- Melting point, **1**: 115
- Refractive index, **1**: 115, 173
- Thermal conductivity, **5**: 232

Matrix brass, **2**: 379; cf. 469, 602**Matrix metal**, **2**: 379**Maucherite**, density, **1**: 132**Maxite**, density, **1**: 117**Maxwell**, definition, **1**: 39**Mayari cast iron**, **2**: 379**Mayari pig**, **2**: 379**Mayari steel**, **2**: 379; cf. 510, 605–607**Mean distance**, definition, **1**: 39**Measures**, national and local systems, **1**: 1**Mechanical equivalent**

- Heat, **5**: 78
- Light, **5**: 436

Meco (alloy), **2**: 379**Meconic acid**

- Crystallography, **1**: 327
- Electrical conductivity, aqueous solution, **6**: 278
- Heat of combustion, **5**: 165
- Heat of solution in water, **5**: 150

Meconine, heat of combustion, **5**: 166**Meionite**

- Density, **1**: 146
- Refractive index, **1**: 146, 167; **7**: 25

Melamine

- Absorption spectra, **5**: 336
- Refractive index, **7**: 29
- Specific heat, **5**: 102

Melanite, thermal expansion, **3**: 45**Melanotekite**

- Density, **1**: 129
- Refractive index, **1**: 129, 173

Melanterite

- Density, **1**: 128
- Refractive index, **1**: 128, 168; **7**: 21

Melezitose

- Crystallography, **1**: 335
- Heat of combustion, **5**: 166
- Optical rotatory power, **2**: 354
- Refractive index, **7**: 30

 β -Melibiose

- Optical rotatory power, **2**: 354
- Solubility in aqueous ethyl alcohol, **4**: 405

Melilite, crystal nuclei, formation of, **5**: 60**Meliphanite**

- Density, **1**: 154
- Refractive index, **1**: 154, 167

Mellite

- Density, **1**: 137
- Refractive index, **1**: 137, 166; **7**: 22
- Specific heat, **5**: 98

Mellitic acid

- Heat of combustion, **5**: 166
- Heat of solution in water, **5**: 150

Melting, volume change on, **2**: 459; **4**: 9**Melting points**

- Accurate, **1**: 53; **4**: 6
- Chemical compounds, **1**: 106, 176, 306
- Elements, **1**: 103

Melting points.—(Continued)

- Fats, animal and vegetable, **2**: 214
- Gelatins, **2**: 229
- Glass, **2**: 97
- Liquid crystals, **1**: 315
- Oils, fats and waxes, **2**: 210, 215
- Petroleum products, **2**: 148
- Pressure, effect of, **4**: 9
- Soaps, **5**: 449
- Solutions, **4**: 1
- Pressure, effect of, **4**: 264
- Sugars and sugar derivatives, **2**: 353

Mendipite

- Density, **1**: 115
- Melting point, **1**: 115
- Refractive index, **1**: 115, 173

Mendozite

- Density, **1**: 153
- Refractive index, **1**: 153, 168

Meneghinite, density, **1**: 116**Meniscus**, liquid, volume of, **1**: 72**Menthadienes**, optical rotatory power, **7**: 409**Menthane**

- Heat of combustion, **5**: 164
- Optical rotatory power, **7**: 410

Menthene

- Azeotropic mixtures, **3**: 321–322, 324
- Heat of combustion, **5**: 164
- Optical rotatory power, **7**: 410
- Refractive index, **7**: 53

Menthenols

- Optical rotatory power, **7**: 412
- Refractive index, **7**: 53

Menthol

- Absorption spectra, **5**: 333, 347
- Boiling point, **3**: 347
- Cryoscopic constant, **4**: 184
- Density, **3**: 30
- Heat of combustion, **5**: 164
- Heat of fusion, **5**: 134
- Heat of solution in water, **5**: 150
- Melting point under pressure, **4**: 10
- Optical rotatory power, **7**: 420
- Surface tension, aqueous solution, **4**: 470
- Viscosity, **5**: 41, 45, 51; **7**: 221
- Volume change on melting, **4**: 16
- Anethole*
- Benzene*
- Camphor*
- Chloral hydrate*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl ether*
- Ethylene bromide*
- Isobutyl alcohol*
- Lophine*
- Menthone

- Freezing point-solubility, **4**: 160

-Methylal

- Boiling point elevation, **3**: 340

-Methylurethan

- Density, **3**: 167
- Freezing point-solubility, **4**: 115
- Viscosity, **5**: 41

-Naphthalene

- Density, **3**: 193
- Freezing point-solubility, **4**: 155
- Viscosity, **5**: 51

-Nitrobenzene

- Density, **3**: 177
- Freezing point-solubility, **4**: 129
- Viscosity, **5**: 45

-Phenyl salicylate

- Freezing point-solubility, **4**: 160

-Phenylsulfone

- Boiling point elevation, **3**: 347

-p-Toluidine

- Freezing point-solubility, **4**: 152

Menthone

- Absorption spectra, **5**: 347
- Boiling point, **3**: 347
- Dielectric constant, **6**: 95
- Electrical conductivity, **6**: 144
- Optical rotatory power, **7**: 414
- Racemization, kinetics of, **7**: 118
- Verdet constant, **6**: 426
- Dispersion, **6**: 433
- Viscosity, **7**: 221

-Menthol***-Phenylsulfone**

- Boiling point elevation, **3**: 347

Menthyl benzenesulfonate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl cinnamate**-Isoamyl acetate*****l-Menthyl diacetyltartrate****-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl mandelate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl o-nitrobenzoate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl β -phenylpropionate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthylamine**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthylcarbimide**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl β -phenylpropionate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl β -phenylpropionate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl β -phenylpropionate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl β -phenylpropionate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl β -phenylpropionate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl β -phenylpropionate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

Menthyl β -phenylpropionate**-Benzene*****-Ethyl alcohol*****-Nitrobenzene**

- Density, **3**: 178

* Data for system will be found under this compound in Index. Full explanation on page vii.

Mercuric bromide.—(Continued)

- Antimony trichloride*
- Barium bromide*
- Benzene*
- Bromine*
- Calcium bromide*
- Carbon disulfide*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl alcohol*-Methyl alcohol
- Ethyl alcohol*-Propyl alcohol
- Fenchone*
- Lead bromide*
- Mercuric chloride
 - Density, **3**: 134
 - Freezing point-solubility, **4**: 56
- Mercuric iodide
 - Density, **3**: 134
 - Freezing point-solubility, **4**: 56
- Mercuric iodide-Sulfur dioxide
 - Vapor pressure, **3**: 374
- Mercurous bromide
 - Freezing point-solubility, **4**: 56
- Methyl acetate
 - Boiling point elevation, **3**: 340
 - Density, **3**: 139
- Methyl alcohol
 - Density, **3**: 139
 - Aqueous solution, **3**: 102
- Methyl alcohol-Propyl alcohol
 - Density, **3**: 143
- Potassium bromide
 - Freezing point-solubility, **4**: 56
 - Freezing point-solubility in water, **4**: 318
- Potassium hydroxide
 - Freezing point-solubility in water, **4**: 318
- Propyl alcohol
 - Density, **3**: 139
- Pyridine
 - Boiling point elevation, **3**: 342
 - Freezing point-solubility, **4**: 199
- Quinoline
 - Freezing point-solubility, **4**: 199
- Selenium
 - Freezing point lowering, **4**: 38
 - Freezing point-solubility, **4**: 31
- Silver bromide
 - Freezing point-solubility, **4**: 56
- Sodium bromide
 - Freezing point-solubility in water, **4**: 318
- Strontium bromide
 - Freezing point-solubility in water, **4**: 318
- Sulfur
 - Freezing point lowering, **4**: 38
- Thallium monobromide
 - Freezing point-solubility, **4**: 54

Mercuric chlorate

Density, aqueous solution, **3**: 66

Mercuric chloride

- Absorption spectra, **5**: 329
- Ammine
 - Heat of formation, **5**: 186
- Boiling point, **1**: 120, 163
- Boiling point elevation in aqueous solution, **3**: 325
- Critical potentials, **6**: 72
- Density
 - Aqueous solution, **3**: 66, 104
 - Liquid, **3**: 23
 - Solid, **1**: 120
- Dielectric constant, **6**: 76, 100
- Diffusion in ethyl alcohol, **5**: 73
- Diffusion in water, **5**: 65
- Electrical conductivity, **6**: 148
 - Aqueous solution, **6**: 232

Mercuric chloride.—(Continued)

- Free energy, **7**: 259
- Fusion, **7**: 259
- Sublimation, **7**: 259
- Freezing point lowering of aqueous solution, **4**: 256
- Heat content, **7**: 259
- Heat of formation, **5**: 186
- Hydrolysis constant, **7**: 259
- Magnetic susceptibility, **6**: 357
- Photoelectric current, **6**: 68, 69
- Refractive index, **7**: 21
 - Aqueous solution, **7**: 70
 - Dispersion, **7**: 100
- Residual rays, **5**: 261
- Solubility in organic solvents, **4**: 205–211
- Solubility in water, **4**: 222
- Specific heat, **5**: 97
 - Aqueous solution, **5**: 122
- Vapor pressure
 - Liquid, **3**: 214
 - Solid, **3**: 208
- Verdet constant, aqueous solution, **6**: 426
- Viscosity, aqueous solution, **5**: 14
- Acetic acid*
- Acetone*
- Acetone*-Cesium chloride
- Acetone*-Potassium chloride
- Acetonitrile*
- Aluminum chloride*
- Ammonium chloride*
- Ammonium chloride*-Potassium chloride
- Ammonium oxalate*
- Amyl alcohol*
- Antimony trichloride*
- Barium chloride*
- Benzene*
- Benzonitrile*
- Calcium chloride*
- Carbon disulfide*
- Cesium chloride*
- Chloroform*
- Citric acid*
- Cobaltous chloride*
- Cobaltous chloride*-Ethyl alcohol
- Cupric chloride*
- Cuprous chloride*
- Diethyl sulfide*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl alcohol*-Ethyl ether
- Ethyl alcohol*-Methyl alcohol
- Ethyl alcohol*-Potassium chloride
- Ethyl alcohol*-Propyl alcohol
- Ethyl alcohol*-Sodium chloride
- Ethyl ether*
- Fenchone*
- Formamide*
- Glycerol*
- Hydrogen chloride*
- Iodine*
- Iron*
- Lead chloride*
- Lithium chloride*
- Magnesium chloride*
- Mercuric bromide*
- Mercuric iodide
 - Freezing point-solubility, **4**: 56, 78
- Mercuric methyl chloride
 - Boiling point elevation, **3**: 338
- Mercuric methyl iodide
 - Boiling point elevation, **3**: 338
- Mercuric oxide
 - Freezing point-solubility in water, **4**: 305
- Mercurous chloride
 - Freezing point-solubility, **4**: 56
- Mercury
 - Free energy and heat of reaction, **7**: 259

Mercuric chloride.—(Continued)

- Methyl acetate
 - Boiling point elevation, **3**: 340
 - Density, **3**: 139
- Methyl alcohol
 - Boiling point elevation, **3**: 334
 - Density, aqueous solution, **3**: 102
 - Freezing point-solubility, **4**: 198
- Methyl alcohol-Propyl alcohol
 - Density, **3**: 143
- Methyl sulfide
 - Boiling point elevation, **3**: 338
- Potassium chloride
 - Density, aqueous solution, **3**: 98
 - Freezing point-solubility, **4**: 56
 - Refractive index, aqueous solution, **7**: 96
- Potassium cyanide
 - Density, aqueous solution, **3**: 98
 - Refractive index, aqueous solution, **7**: 96
- Potassium iodide
 - Density, aqueous solution, **3**: 98
 - Refractive index, aqueous solution, **7**: 96
- Potassium oxalate
 - Photochemical reaction, **7**: 165
- Propyl alcohol
 - Density, **3**: 139
- Pyridine
 - Boiling point elevation, **3**: 342
 - Density, **3**: 139
 - Freezing point-solubility, **4**: 199
 - Specific heat, **5**: 125
 - Verdet constant, **6**: 427
- Rubidium chloride
 - Freezing point-solubility, **4**: 56
- Selenium
 - Freezing point lowering, **4**: 38
 - Freezing point-solubility, **4**: 31
- Silver bromide
 - Solubility in water, **7**: 267
- Silver chloride
 - Solubility in water, **7**: 266
- Silver iodide
 - Freezing point-solubility, **4**: 56
 - Solubility in water, **7**: 268
- Sodium chloride
 - Density, aqueous solution, **3**: 98
 - Freezing point-solubility, **4**: 56
 - Freezing point-solubility in water, **4**: 305
- Sodium formate
 - Photochemical reaction, **7**: 165
- Strontium chloride
 - Freezing point-solubility, **4**: 305
- Sucrose
 - Freezing point-solubility in water, **4**: 422
- Sulfur
 - Freezing point lowering, **4**: 38
 - Freezing point-solubility, **4**: 31
- d-Tartaric acid
 - Freezing point-solubility in water, **4**: 415
- Tetralin
 - Distribution coefficients in water, **3**: 421
- Thallium monochloride
 - Freezing point-solubility, **4**: 53
- Toluene
 - Distribution coefficients in water, **3**: 421
- Mercuric cyanide**
 - Boiling point elevation in aqueous solution, **3**: 325
 - Density, aqueous solution, **3**: 66
 - Dielectric constant, **6**: 76
 - Freezing point lowering of aqueous solution, **4**: 256
 - Heat of formation, **5**: 187

* Data for system will be found under this compound in Index. Full explanation on page vii.

Mercuric cyanide.—(Continued)

- Solubility in organic solvents, **4**: 205–211
 Solubility in water, **4**: 222
 Specific heat, **5**: 97
 Surface tension, aqueous solution, **4**: 464
 Vapor pressure lowering in aqueous solution, **3**: 294
 Verdet constant, aqueous solution, **6**: 426
 Viscosity, aqueous solution, **5**: 14
 -Ammonia*
 -Aniline*
 -Ethyl acetate*
 -Ethyl alcohol*
 -Ethyl alcohol*-Methyl alcohol
 -Ethyl alcohol*-Propyl alcohol
 -Ethyl ether*
 -Methyl acetate
 Boiling point elevation, **3**: 340
 -Methyl alcohol
 Density, **3**: 139
 Aqueous solution, **3**: 102
 -Methyl alcohol-Propyl alcohol
 Density, **3**: 143
 -Phthalic acid
 Density, aqueous solution, **3**: 102
 Freezing point-solubility in water, **4**: 419
 -Propyl alcohol
 Density, **3**: 139
 -Pyridine
 Boiling point elevation, **3**: 342
 Density, **3**: 139
 Freezing point-solubility, **4**: 199
 Verdet constant, **6**: 427
 -Quinoline
 Freezing point-solubility, **4**: 199
Mercuric ethyl chloride
 -Pyridine
 Boiling point elevation, **3**: 342
Mercuric fluoride, vapor pressure, **3**: 208
Mercuric hydride
 Heat of dissociation, **5**: 418
Mercuric iodide
 Absorption spectra, solutions, **5**: 328
 Amines
 Heat of formation, **5**: 186
 Cryoscopic constant, **4**: 215
 Density, liquid, **3**: 23
 Electrical conductivity, **6**: 148
 Aqueous solution, **6**: 258
 Heat of formation, **5**: 186
 Heat of fusion, **5**: 131
 Heat of transition, **5**: 186
 Luminescence, **5**: 389
 Magnetic susceptibility, **6**: 357
 Melting point under pressure, **4**: 12, 17
 Photoelectric current, **6**: 68, 69
 Refractive index, **7**: 21
 Solubility in organic solvents, **4**: 205–211
 Solubility in water, **4**: 222
 Specific heat, **5**: 97
 Thermal expansion, **3**: 44
 Transition temperature, **4**: 7
 Vapor pressure
 Liquid, **3**: 214
 Solid, **3**: 208
 Viscosity, **7**: 212
 Volume change on melting, **4**: 12
 X-ray diffraction data, **1**: 342
 -Acetone*-Potassium iodide
 -Acetonitrile*
 -Aniline*
 -Barium iodide*
 -Benzene*
 -Benzonitrile*
 -Cadmium iodide*
 -Calcium iodide*
 -Carbon disulfide*
 -Diethyl sulfide*
 -Ethyl acetate*

Mercuric iodide.—(Continued)

- Ethyl alcohol*
 -Ethyl alcohol*-Methyl alcohol
 -Ethyl alcohol*-Propyl alcohol
 -Ethyl ether*-Potassium iodide
 -Ethyl iodide*
 -Fenchone*
 -Iodine*
 -Lead iodide*
 -Mercuric bromide*
 -Mercuric bromide*-Sulfur dioxide
 -Mercuric chloride*
 -Mercuric methyl chloride
 Boiling point elevation, **3**: 338
 -Mercuric methyl iodide
 Boiling point elevation, **3**: 338
 -Mercuric potassium iodide
 Density, **3**: 134
 -Mercurous iodide
 Freezing point-solubility, **4**: 56
 -Methyl acetate
 Boiling point elevation, **3**: 340
 -Methyl alcohol
 Density, **3**: 139
 Aqueous solution, **3**: 102
 -Methyl alcohol-Propyl alcohol
 Density, **3**: 143
 -Methyl sulfide
 Boiling point elevation, **3**: 338
 -Methylene iodide
 Density, **3**: 139
 -Nitrobenzene
 Freezing point solubility, **4**: 199
 -p-Nitrotoluene
 Freezing point-solubility, **4**: 199
 -Potassium iodide
 Density, aqueous solution, **3**: 98
 Freezing point-solubility, **4**: 56
 Freezing point-solubility in water, **4**: 320
 -Propyl alcohol
 Density, **3**: 139
 -Pyridine
 Boiling point elevation, **3**: 342
 Freezing point-solubility, **4**: 199
 Specific heat, **5**: 125
 Verdet constant, **6**: 427
 -Quinoline
 Freezing point-solubility, **4**: 199
 -Silver iodide
 Freezing point-solubility, **4**: 56
 -Sodium iodide
 Freezing point-solubility in water, **4**: 319
 -Strontium iodide
 Freezing point-solubility in water, **4**: 319
Mercuric methyl bromide
 Absorption spectra, solutions, **5**: 328
Mercuric methyl chloride
 Absorption spectra, solutions, **5**: 328
 -Diethyl sulfide*
 -Ethyl alcohol*
 -Mercuric chloride*
 -Mercuric iodide*
Mercuric methyl iodide
 Absorption spectra, solutions, **5**: 328
 -Diethyl sulfide*
 -Ethyl alcohol*
 -Mercuric chloride*
 -Mercuric iodide*
Mercuric nickel bromide
 Heat of formation, **5**: 192
Mercuric nitrate
 Absorption spectra, solutions, **5**: 328
 Heat of formation, **5**: 186
 -Nitric acid
 Density, aqueous solution, **7**: 91
 Refractive index, aqueous solution
 7: 91
 Dispersion, **7**: 108

Mercuric nitride, heat of formation, **5**: 186

- Mercuric oxalate**
 Heat of formation, **5**: 186
 -Potassium oxalate
 Freezing point-solubility in water, **4**: 372
Mercuric oxide
 Entropy, **5**: 90
 Free energy, **7**: 259
 Decomposition, **7**: 259
 Heat content, **5**: 90; **7**: 259
 Heat of decomposition, **7**: 259
 Heat of formation, **5**: 186
 Hydrogen, reaction with, **7**: 259
 Magnetic susceptibility, **6**: 357
 Photoelectric current, **6**: 68
 Solubility in water, **4**: 222
 Specific heat, **5**: 90, 96; **7**: 259
 Thermodynamic potential, **5**: 90
 Vapor pressure, **7**: 259
 See also Montroydite.
 -Cadmium amalgams*
 -Chromic acid*
 -Hydrogen fluoride*
 -Mercuric chloride*
 -Nitric acid
 Freezing point-solubility in water, **4**: 362
 -Silver
 Electrode potential and free energy of reaction, **7**: 272
 -Sulfuric acid
 Freezing point-solubility in water, **4**: 339, 389
Mercuric oxybromides, heat of formation, **5**: 186
Mercuric oxychlorides, heat of formation, **5**: 186
Mercuric perchlorate
 Absorption spectra, solutions, **5**: 328
Mercuric potassium bromide, heat of formation, **5**: 205
Mercuric potassium chloride
 Density, **1**: 156
 Heat of formation, **5**: 205
 Refractive index, **1**: 156, 172
Mercuric potassium cyanide, heat of formation, **5**: 205
Mercuric potassium iodide
 Density, aqueous solution, **3**: 91
 Heat of formation, **5**: 205
 Verdet constant, aqueous solution, **6**: 427, 428
 -Mercuric iodide*
Mercuric selenide, heat of formation, **5**: 186
Mercuric selenite
 -Sodium selenite
 Freezing point-solubility in water, **4**: 356
Mercuric sodium bromide, heat of formation, **5**: 202
Mercuric sodium chloride, density, aqueous solution, **3**: 86
Mercuric sodium cyanide, heat of formation, **5**: 202
Mercuric sodium sulfide, heat of formation, **5**: 202
Mercuric strontium bromide, heat of formation, **5**: 198
Mercuric strontium cyanide, heat of formation, **5**: 198
Mercuric sulfate
 Heat of formation, **5**: 186
 -Copper amalgam*
 -Gold*
 -Sulfuric acid
 Freezing point-solubility, **4**: 43
Mercuric sulfide
 Density, **3**: 44
 Heat of formation, **5**: 186

Mercuric sulfide.—(Continued)

Magnetic susceptibility, **6**: 357
 Optical rotatory power, **7**: 353
 Refractive index, **7**: 21
 Specific heat, **5**: 97
 Thermal conductivity, **5**: 232
 Vapor pressure, **3**: 208
 X-ray diffraction data, **1**: 342
See also Cinnabarite.

-Antimony trisulfide*

Mercuric thiocyanate, heat of formation, **5**: 187

Mercurous acetate

Heat of formation, **5**: 187
 Solubility in water, **4**: 222
 -Acetic acid*

Mercurous benzoate

Photoelectric current, **6**: 68

Mercurous bromide

Bromine ion, reaction with, **7**: 260
 Electrode potential, **7**: 260
 Free energy of electrode reaction, **7**: 260
 Heat of formation, **5**: 186
 Hydrogen, reaction with, **7**: 260
 Photoelectric current, **6**: 69
 Thermal conductivity, **5**: 216
 X-ray diffraction data, **1**: 342
 -Aluminum bromide*
 -Cadmium amalgams*
 -Mercuric bromide*

Mercurous chloride

Ammonia, decomposition pressure, **7**: 259
 Heat of formation, **5**: 186
 Boiling point, **1**: 120, 163
 Bromide ion, reaction with, **7**: 260
 Density, **1**: 120
 Dielectric constant, **6**: 76, 99
 Electrical conductivity, aqueous solution, **6**: 258
 Electrode potential, **7**: 259
 Entropy, **5**: 90
 Free energy
 Electrode reaction, **7**: 259
 Vaporization, **7**: 259
 Heat content, **5**: 90
 Heat of formation, **5**: 186
 Hydrogen, reaction with, **7**: 259
 Magnetic susceptibility, **6**: 357
 Photoelectric current, **6**: 68, 69
 Refractive index, **1**: 120, 167; **7**: 21
 Residual rays, **5**: 261
 Specific heat, **5**: 90, 96
 Thermal conductivity, **5**: 216, 232
 Thermodynamic potential, **5**: 90
 Vapor pressure
 Liquid, **3**: 214
 Solid, **3**: 208
 X-ray diffraction data, **1**: 342
 -Cadmium amalgams*
 -Lead amalgam*
 -Mercuric chloride*
 -Thallium amalgam
 Electromotive force, **7**: 259

Mercurous cyanide

Ammonia, decomposition pressure, **7**: 260

Mercurous iodide

Electrode potential, **7**: 260
 Free energy of electrode reaction, **7**: 260
 Heat of formation, **5**: 186
 Photoelectric current, **6**: 68, 69
 Specific heat, **5**: 97
 X-ray diffraction data, **1**: 342
 -Cadmium amalgam*
 -Lead amalgam*
 -Mercuric iodide*

Mercurous nitrate

Absorption spectra, solutions, **5**: 328
 Concentration cells, **6**: 326
 Electrical conductivity, aqueous solution, **6**: 237
 Heat of formation, **5**: 186

Mercurous nitrate.—(Continued)

Reflectivity, selective, **5**: 260

-Nitric acid

Density, aqueous solution, **7**: 92
 Freezing point-solubility in water, **4**: 362
 Refractive index, aqueous solution, **7**: 92
 Dispersion, **7**: 108

Mercurous oxide

Heat of formation, **5**: 186
 Photoelectric current, **6**: 68

-Mercurous sulfate

Freezing point-solubility in water, **4**: 339

Mercurous sulfate

Density, aqueous solution, **3**: 66
 Free energy, **7**: 260
 Heat of formation, **5**: 186
 Solubility in water, **4**: 222
 Specific heat, **5**: 87, 97
 -Cadmium amalgams*
 -Lead amalgam*
 -Mercurous oxide*
 -Sulfuric acid
 Freezing point-solubility, **4**: 43
 Freezing point-solubility in water, **4**: 339
 -Zinc amalgam
 Electromotive force, **7**: 260

Mercury

Absorption, index of, **5**: 249
 Absorption spectra, solutions, **5**: 328
 Accommodation coefficient, **5**: 53
 Air film, thickness of, on, **4**: 476
 Angle of contact, **4**: 434
 Boiling point, **1**: 102; **3**: 205
 Cadmium, diffusion of, in, **5**: 75
 Cathodoluminescence, **5**: 388, 390
 Compressibility, **3**: 47
 Condensation, irreversible, temperature of, **5**: 53
 Contact potential, **6**: 57
 Critical constants, **1**: 102; **3**: 248
 Critical potentials, **6**: 71
 Density
 Gas, **1**: 102
 Liquid, **1**: 102; **2**: 457
 Solid, **1**: 104; **2**: 456
 Dielectric constant, gas, **6**: 74
 Diffusion of vapor in air, **5**: 62
 Electrical conductivity
 Liquid, **1**: 103
 Solid, **1**: 104; **6**: 136, 137
 Low temperature, **6**: 127, 133
 Magnetic field, effect of, **6**: 422
 Electrode potential, **7**: 259
 Electron emission excited by positive ions, **6**: 65
 Electrons, absorption of, by vapor of, **6**: 61
 Electrons, secondary emission of, **6**: 63
 Emission, spectral, **5**: 253
 Emission spectra, **5**: 299
 Entropy
 Gas, **7**: 258
 Liquid, **5**: 88; **7**: 258
 Vaporization, **7**: 258
 Evaporation, velocity of, **5**: 54
 Fluorescence of vapor, **5**: 391
 Free energy
 Electrode reaction, **7**: 259
 Fusion, **7**: 259
 Gas, **7**: 258
 Sublimation, **7**: 258
 Vaporization, **7**: 258
 Gamma rays, absorption coefficient, **6**: 21
 Gold, diffusion of, in, **5**: 75
 Heat content, **5**: 88; **7**: 258
 Heat of fusion, **1**: 104; **2**: 458; **7**: 259

Mercury.—(Continued)

Heat of vaporization, **1**: 102; **2**: 458; **7**: 258
 Interfacial tension, **4**: 438
 Internal pressure, **4**: 19
 Isotopes, **1**: 45
 Magnetic susceptibility, **6**: 355
 Magneton number, **6**: 346
 Melting point, **1**: 53, 104
 Meniscus, volume of, **1**: 72
 Molecular data, **1**: 92
 Oil film, thickness of, on, **4**: 476
 Persistent lines, **5**: 323
 Photoelectric threshold, **6**: 68
 Quantum numbers, **5**: 408
 Refractive index, **1**: 103; **5**: 249
 Gas, **7**: 7
 Solution velocity in dissolved bromine, **5**: 56
 Solution velocity in dissolved iodine, **5**: 56
 Sound, velocity of
 Gas, **6**: 462, 463
 Liquid, **6**: 464
 Specific heat
 Gas, **5**: 80
 Liquid, **1**: 103; **5**: 85, 88, 113; **7**: 258
 Pressure, effect of, **5**: 114
 Solid, **1**: 104; **5**: 85, 88, 113; **7**: 258
 Spectral series, **5**: 399
 Surface tension, **1**: 103; **4**: 440, 476
 Thermal conductivity
 Gas, **5**: 213, 214
 Liquid, **5**: 220, 221
 Thermal expansion
 Liquid, **1**: 102; **2**: 457
 Solid, **1**: 104
 Thermochemistry, **5**: 186
 Thermodynamic potential, **5**: 88
 Thermoelectric properties, **6**: 214, 225
 Thomson coefficient, **6**: 228
 Toxicology, **2**: 320
 Vapor pressure, **3**: 205, 206
 Viscosity
 Gas, **1**: 102; **5**: 2
 Liquid, **5**: 7
 X-ray absorption limits, **6**: 42
 X-ray emission spectra, **6**: 42
 X-ray series, limiting frequencies, **6**: 35
 Zeeman effect, **5**: 420
 -Aluminum*
 -Antimony*
 -Barium*
 -Bismuth*
 -Bismuth*-Lead
 -Cadmium*
 -Calcium*
 -Cesium*
 -Copper*
 -Copper*-Silver-Tin
 -Gold*
 -Indium*
 -Lead*
 -Lithium*
 -Magnesium*
 -Manganese*
 -Mercuric chloride*
 -Potassium
 Density, **2**: 589
 Electrical conductivity, **6**: 190, 198
 Photoelectric sensitivity, wave length for maximum, **6**: 68
 Specific heat, **5**: 119
 Surface tension, **2**: 591
 Thermoelectric properties, **6**: 220
 Vapor pressure, **3**: 284
 -Rubidium
 Surface tension, **2**: 591
 -Silver
 Density, **2**: 589
 Electrical conductivity, **6**: 190

* Data for system will be found under this compound in Index. Full explanation on page vii.

Mercury-Silver.—(Continued)Thermoelectric properties, **6**: 220Vapor pressure, **3**: 284Vapor pressure lowering, **3**: 300**-Silver-Zinc**Thermal expansion, **2**: 472**-Silver chloride**Electrode potential, **7**: 266**-Sodium**Density, **2**: 589, 594Electrical conductivity, **6**: 190, 198Equilibrium diagram, **2**: 436Specific heat, **5**: 119Surface tension, **2**: 591Thermoelectric properties, **6**: 220**-Strontium**Surface tension, **2**: 591**-Sulfuric acid**Equilibrium constant of reaction, **7**: 260Free energy of reaction, **7**: 260**-Tellurium**Equilibrium diagram, **2**: 435Freezing point-solubility, **4**: 28**-Thallium**Density, **2**: 589Electrical conductivity, **6**: 191Equilibrium diagram, **2**: 436Hardness, **2**: 587Specific volume, **2**: 589Surface tension, **2**: 591Thermal expansion, **2**: 474Thermoelectric properties, **6**: 220Vapor pressure lowering, **3**: 300**-Tin**Density, **2**: 474, 589Electrical conductivity, **6**: 191Equilibrium diagram, **2**: 416Hardness, **2**: 586Specific volume, **2**: 589Specific heat, **5**: 119Surface tension, **2**: 591Thermal expansion, **2**: 474Thermoelectric properties, **6**: 220Vapor pressure lowering, **3**: 300**-Zinc**Density, **2**: 589Electrical conductivity, **6**: 192Equilibrium diagram, **2**: 436Hardness, **2**: 586Specific heat, **5**: 119Specific volume, **2**: 589Surface tension, **2**: 591Thermoelectric properties, **6**: 220Thermal expansion, **2**: 474Vapor pressure lowering, **3**: 300Viscosity, liquid, **5**: 7**Mercury** (planet), characteristics, **1**: 392**Mercury arc**, filters for, **5**: 272**Mercury diethyl**, dielectric constant, **6**: 87**Mercury dimethyl**, ionization by X-rays, **6**: 123**Mercury diphenyl****-Triphenylbismuthine**Freezing point-solubility, **4**: 199**-Triphenylstibine**Freezing point-solubility, **4**: 199**Mercury hydride**, band spectra, **5**: 414**Mercury oxide cell**, **6**: 315**Mercury tetraphenyl****-Tin tetraphenyl**Freezing point-solubility, **4**: 49**Mercury vapor lamp**, filters for, **7**: 160**Merwinite**Density, **1**: 146Refractive index, **1**: 146, 172**Mesaconic acid**Absorption spectra, **5**: 337Density, aqueous solution, **3**: 114Electrical conductivity, aqueous solution, **6**: 269**Mesaconic acid.**—(Continued)Heat of combustion, **5**: 165Heat of solution in water, **5**: 149**-Methyl alcohol**Viscosity, **5**: 34**Mesitite**, thermal conductivity, **5**: 232**Mesityl oxide**Absorption spectra, **5**: 340, 372, 374Dielectric constant, **6**: 90Heat of vaporization, **5**: 137Refractive index, **7**: 39Specific heat, **5**: 110Surface tension, **4**: 454Viscosity, **7**: 217**-Isoamyl acetate*****Mesityl oxide oxime**Refractive index, **7**: 39Surface tension, **4**: 455**Mesitylene**Absorption spectra, **5**: 333, 345Azeotropic mixtures, **3**: 320–322Birefringence, **7**: 111Boiling point, **3**: 225Compressibility, **3**: 37Dielectric constant, **6**: 94Diffusion of vapor in air, **5**: 63Heat of combustion, **5**: 163Heat of vaporization, **5**: 137Photoluminescence, **5**: 387Refractive index, **7**: 47Specific heat, **5**: 112Surface tension, **4**: 437, 459Vapor pressure, **3**: 225Verdet constant, **6**: 430X-ray diffraction bands, **1**: 352X-rays, absorption coefficient, **6**: 14, 16X-rays, scattering of, **6**: 17**-Antimony tribromide*****-Antimony trichloride*****-Benzoyl chloride*****-Diethyl tartrate*****-Ethyl alcohol*****-Ethylene bromide*****-Hydrogen bromide*****Mesitylenic acid**, heat of combustion, **5**: 165**Mesitylenephosphinous acid**Solubility in water, **4**: 253**Mesolite**Density, **1**: 154Refractive index, **1**: 154, 169; **7**: 27**Mesoporphyrin hydrochloride**Absorption spectra, **5**: 374**Mesotartaric acid**Absorption spectra, **5**: 337Heat of combustion, **5**: 165**Mesoxalic acid**, heat of combustion, **5**: 165**Metaantimonious acid**, magnetic susceptibility, **6**: 356**Metaarsenious acid****-Ammonium hydroxide*****Metabismuthous acid**Magnetic susceptibility, **6**: 356**Metacinnabarite**Density, **1**: 121

See also Mercuric sulfide.

MetahewettiteDensity, **1**: 145Refractive index, **1**: 145, 173**Metaresinolic acid**, optical rotatorypower, **7**: 466**Metaldehyde**Crystallography, **1**: 328**-Acetaldehyde*****Metalline** (alloy), **2**: 379**Metallurgy**, **2**: 358**Metanethole****-Chloroform*****Metaphosphoric acid**Density, aqueous solution, **3**: 61Heat of formation, **5**: 180Specific heat, aqueous solution, **5**: 122**Metatorbernite I**Density, **1**: 134Refractive index, **1**: 134, 167**Metatungstic acid**Density, aqueous solution, **3**: 105**Metavariscite**Density, **1**: 137Refractive index, **1**: 137, 170**Meteorite** (alloy), **2**: 379**Meteorites**, radioactivity, **1**: 380**Meter**, definition, **1**: 1**Meter-candle**, definition, **1**: 39**Meter-kilogram**, definition, **1**: 39**Methane**Absorption spectra, **5**: 331, 335Adsorption by wood charcoal, **3**: 250Boiling point, **3**: 216, 230, 333Compressibility, **3**: 14Critical point data, **3**: 230, 248Critical potentials, **6**: 72Decomposition pressure of hydrate, **7**: 244Density, gas, **3**: 3Detonation, **2**: 185Dielectric constant, **6**: 82Electrical ignition, **2**: 175Electrons, absorption of, by, **6**: 61Electrons, secondary emission of, **6**: 63Explosion in closed vessels, **2**: 191Explosive mixtures, limiting dilutions, **2**: 186Flame propagation in, **2**: 182Free energy, **7**: 244Formation, **7**: 244Reaction with water vapor, **7**: 244Heat content, **7**: 244Heat of adsorption on charcoal, **5**: 141Heat of combustion, **5**: 163Heat of formation, **5**: 181; **7**: 244Heat of fusion, **5**: 132Heat of vaporization, **5**: 136Ignition temperature, **2**: 173Inflammability, limits of, **2**: 177Ionization by α -particles, **6**: 122Ionization by electrons, **6**: 120Joule-Thomson effect, **5**: 146Magnetic susceptibility, **6**: 361Orthobaric density, **3**: 230Polarization of light scattered by, **5**: 265Refractivity, **7**: 10Solubility in non-aqueous liquids, **3**: 268Solubility in sulfuric acid, **3**: 280Solubility in water, **3**: 260Sound, velocity of, in, **6**: 463

Specific heat

Gas, **5**: 80, 81, 83; **7**: 244Liquid, **5**: 86, 107Solid, **5**: 86Thermal conductivity, gas, **5**: 214, 215Thermal expansion, gas, **3**: 14

Vapor pressure

Liquid, **3**: 216Solid, **3**: 208Vapor pressure above 1 atm., **3**: 230Viscosity, gas, **5**: 3**-Carbon dioxide*****-Ethane*****-Ethylene*****-Hydrogen*****-Oxygen**Viscosity, **5**: 5**Methoxyacetic acid**, electrical conductivity, aqueous solution, **6**: 264**Methoxyacetophenone** (*o*-, *m*-, *p*-)
Refractive index, **7**: 46**p-Methoxyazobenzene**, magnetic susceptibility, **6**: 363**o-Methoxybenzaldehyde**Verdet constant, **6**: 429

* Data for system will be found under this compound in Index. Full explanation on page vii.

p-Methoxybenzaldehyde

Absorption spectra, **5**: 343
Surface tension, **4**: 457
Viscosity, **7**: 219

m-Methoxybenzenesulfonamide

-Methylamine
Density, **3**: 152
Viscosity, **5**: 35

p-Methoxybenzoic acid

Electrical conductivity, aqueous solution, **6**: 286
Heat of combustion, **5**: 165
Solubility in water, **3**: 392
-Chloroform*

p-Methoxycinnamic acid

Electrical conductivity, aqueous solution, **6**: 295
Heat of combustion, **5**: 166
-p-Azoxyanisole*
-p-Azoxyphenetole*
-Hydroquinol*

o-Methoxy-p-methylacetophenone

-Benzene*

p-Methoxymethylbenzene

-Chloroform*

p-Methoxypropylbenzene

-Toluene
Boiling point elevation, **3**: 346

p-Methoxyquinoline, absorption spectra,

5: 345, 369
Methoxystyrenes, refractive index, **7**: 46
Methoxysuccinic acid, optical rotatory power, **7**: 372

Methoxytoluene (o-, m-, p-)

Refractive index, **7**: 43

Methoxytoluic acids, electrical conductivity, aqueous solution, 6: 291**Methyl acetate**

Absorption spectra, **5**: 331, 336
Azeotropic mixtures, **3**: 318-320
Boiling point, **3**: 218
Compressibility, **3**: 36, 39
Aqueous solution, **3**: 440
Critical point data, **3**: 240, 248
Density, **3**: 28
Aqueous solution, **3**: 112, 114
Dielectric constant, **6**: 82, 86
Diffusion of vapor in gases, **5**: 62
Electrical conductivity, **6**: 143
Flash point, **2**: 161
Freezing point lowering of aqueous solution, **4**: 262
Heat of combustion, **5**: 167
Heat of vaporization, **5**: 137
Ionization by X-rays, **6**: 123
Ions, mobility of, in, **6**: 112
Magnetic susceptibility, **6**: 361
Orthobaric density, **3**: 240
Polarization of light scattered by, **5**: 265
Refractive index
Gas, **7**: 10
Liquid, **7**: 35
Saponification, kinetics of, **7**: 128, 130
Solubility in water, **3**: 387
Solubility of salts in, **4**: 208
Specific heat
Gas, **5**: 80
Liquid, **5**: 108
Surface tension, **4**: 450
Aqueous solution, **4**: 467
Thermal conductivity
Gas, **5**: 214, 215
Liquid, **5**: 228
Vapor pressure
Aqueous solution, **3**: 364, 365
Partial, **3**: 290
Liquid, **3**: 218
Solid, **3**: 209
Vapor pressure above 1 atm., **3**: 240
Verdet constant, **6**: 428

Methyl acetate.—(Continued)

Viscosity

Gas, **5**: 3

Liquid, **7**: 214

-Aniline*

-Azobenzene*

-Barium iodide*

-Benzene*

-Benzil*

-Benzoic acid*

-Bismuth chloride*

-Bromoform*

-Butyric acid*

-Cadmium iodide*

-Calcium nitrate*

-Camphor*

-Carbon disulfide*

-Carbon tetrachloride*

-1-Chlorotetrahydronaphthalene*

-Cobaltous bromide*

-Cobaltous nitrate*

-Cupric bromide*

-Cupric chloride*

-p-Dibromobenzene*

-Dimethylaniline*

-Diphenylamine*

-Ethyl acetate*

-Ethyl alcohol*

-Ethyl chloroacetate*

-Ethyl formate*

-Iodine*

-Lithium bromide*

-Lithium chloride*

-Lithium iodide*

-Lithium thiocyanate*

-Magnesium iodide*

-Mercuric bromide*

-Mercuric chloride*

-Mercuric cyanide*

-Mercuric iodide*

-Naphthalene

Boiling point elevation, **3**: 339

Density, **3**: 164

-Nitrocellulose

Density, **3**: 196

-Paraldehyde

Density, **3**: 164

-Pentachloroethane

Vapor pressure, **3**: 287

-Phenanthrene

Density, **3**: 164

-Phenyl benzoate

Boiling point elevation, **3**: 339

-Picric acid

Boiling point elevation, **3**: 339

-Potassium thiocyanate

Boiling point elevation, **3**: 340

-Sodium thiocyanate

Boiling point elevation, **3**: 340

-Stannous chloride

Boiling point elevation, **3**: 340

-Sucrose

Vapor pressure, aqueous solution, **3**: 292, 379

-Tetraamylammonium iodide

Boiling point elevation, **3**: 340

-Tetrapropylammonium picrate

Boiling point elevation, **3**: 340

-Triamylammonium bromide

Boiling point elevation, **3**: 340

-Triamylammonium chloride

Boiling point elevation, **3**: 340

-Triamylammonium fluoride

Boiling point elevation, **3**: 340

-Triamylammonium thiocyanate

Boiling point elevation, **3**: 340

-Xylene

Density, **3**: 164

-Zinc nitrate

Boiling point elevation, **3**: 340

Methyl acetoacetate

Absorption spectra, **5**: 338
Azeotropic mixtures, **3**: 321
Electrical conductivity, aqueous solution, **6**: 269
Refractive index, **7**: 37
Saponification, kinetics of, **7**: 131
Viscosity, **7**: 216
-Diethyl tartrate*

Methyl acetoneoxalate

Dielectric absorption, **6**: 90
Dielectric constant, **6**: 90

Methyl acetophenoneoxalate

Dielectric absorption, **6**: 95
Dielectric constant, **6**: 95

Methyl α -acetoxypropionate

Surface tension, **4**: 455

-Nitrobenzene

Density, **3**: 176

-Tetrachloroethane

Density, **3**: 154

Methyl alcohol

Absorption, index of, **6**: 97
Absorption spectra, **5**: 331, 335
Acids, esterification of, by, **7**: 138
Azeotropic mixtures, **3**: 318, 319
Boiling point, **3**: 216, 333
Aqueous solution, **3**: 309
Compressibility, **3**: 41
Condensation on ions and nuclei, **6**: 117
Critical point data, **3**: 237, 248
Density, **3**: 27
Aqueous solution, **3**: 111, 115
Solid, **3**: 45
Dielectric absorption, **6**: 97
Dielectric constant, **6**: 82, 83, 105
Aqueous solution, **5**: 100
Dielectric dispersion, **6**: 97
Diffusion of vapor in gases, **5**: 62
Diffusion in water, **5**: 69
Electrical conductivity, **6**: 143
Electrical ignition, **2**: 175
Emission, spectral, **5**: 258
Flash point, **2**: 161
Freezing point lowering of aqueous solution, **4**: 262
Heat of adsorption on charcoal, **5**: 140
Heat of combustion, **5**: 164
Heat of dilution with water, **5**: 162
Heat of formation, **5**: 181
Heat of fusion, **5**: 132
Heat of solution in water, **5**: 148, 159
Heat of transition, **5**: 181
Heat of vaporization, **5**: 136, 138
Heat of wetting, **5**: 142
Ignition temperature, **2**: 174
Inflammability, limits of, **2**: 180
Ionization of vapor by α -particles, **6**: 122
Ionization of vapor by β -particles, **6**: 121
Ions, mobility of, in, **6**: 112
Magnetic susceptibility, **6**: 361
Melting point, **3**: 45
Orthobaric density, **3**: 237
Polarization of light reflected from, **5**: 261
Polarization of light scattered by
Gas, **5**: 265
Liquid, **5**: 266
Pressure-volume relations for gas, **3**: 436
Refractive index
Aqueous solution, **7**: 66
Gas, **7**: 10
Liquid, **6**: 97; **7**: 12, 34, 79
Solubility in water, **4**: 251
Solubility of salts, **4**: 206
Sound, velocity of
Gas, **6**: 463
Liquid, **6**: 464
Specific heat
Aqueous solution, **5**: 116
Gas, **5**: 80, 81

* Data for system will be found under this compound in Index. Full explanation on page vii.

Methyl alcohol.—(Continued)

Specific heat.—(Continued)

Liquid, **5**: 107, 114Surface tension, **4**: 448Aqueous solution, **4**: 467, 470

Thermal conductivity

Aqueous solution, **5**: 227Gas, **5**: 214, 215Liquid, **5**: 227Pressure, effect of, **5**: 227Vapor pressure, **3**: 216Aqueous solution, **3**: 290Vapor pressure above 1 atm., **3**: 237Verdet constant, **6**: 427Dispersion, **6**: 433, 434

Viscosity

Aqueous solution, **5**: 22Liquid, **5**: 11, 27; **7**: 213X-radiation, scattered, distribution of, **6**: 19

-Acenaphthene*

-Acetamide*

-Acetanilide*

-Acetic acid*

-Acetone*

-Acetone*-Ammonia

-Acetone*-Calcium nitrate

-Acetone*-Lithium bromide

-Acetone*-Potassium fluoride

-Acetone*-Potassium thiocyanate

-Acetonitrile*

-Acetylenedicarboxylic acid*

-Air*

-Aminobenzoic acid (o-, p-)*

-Ammonia*

-Ammonium bromide*

-Ammonium bromide*-Ethyl alcohol

-Ammonium bromide*-Glycerol

-Ammonium bromide*-Propyl alcohol

-Ammonium chloride*

-Ammonium chloride*-Ethyl alcohol

-Ammonium iodide*

-Ammonium nitrate*

-Ammonium nitrate*-Ethyl alcohol

-Ammonium perchlorate*

-Ammonium thiocyanate*

-Amyl alcohol*

-Aniline*

-Aniline benzenesulfonate*

-Aniline hydrochloride*

-Anisole*

-Anthracene*

-Anthraquinone*

-Barium bromide*

-Barium chloride*

-Barium perchlorate*

-Benzaldehyde*

-Benzene*

-Benzenesulfonic acid*

-Benzil*

-Benzoic acid*

-Boric acid*

-Borneol*

-Bromine*

-Bromobenzene*

-d-Bromocamphor*

-Bromoforn*

-Bromonaphthalene*

-Butane*

-Butyric acid*

-Cadmium iodide*

-Calcium chloride*

-Calcium nitrate*

-Calcium perchlorate*

-Camphor*

-Camphorcarboxylic acid*

-Carbon dioxide*

-Carbon disulfide*

-Carbon tetrachloride*

-Cesium chloride*

-Cesium nitrate*

Methyl alcohol.—(Continued)

-Cesium perchlorate*

-Chloral*

-Chlorine*

-Chloroform*

-Chromic chloride*

-Cinnamic acid*

-Cinnamyl alcohol*

-Citraconic acid*

-Cobaltous chloride*

-Cobaltous chloride*-Glycerol

-Cottonseed oil*

-m-Cresol*

-Cupric chloride*

-Cyclohexane*

-Diethyl malate*

-Diethyl tartrate*

-Diisoamyl*

-Dimethyl acetylmaleate*

-Dimethyl malate*

-Dimethyl tartrate*

-Dimethylaniline*

-Dinitromesitylene*

-Dinitrophenol*

-Diphenyl*

-Diphenylamine*

-Ethane*

-Ethyl acetate*

-Ethyl alcohol*

-Ethyl alcohol*-Mercuric bromide

-Ethyl alcohol*-Mercuric chloride

-Ethyl alcohol*-Mercuric cyanide

-Ethyl alcohol*-Mercuric iodide

-Ethyl alcohol*-Potassium iodide

-Ethyl alcohol*-Potassium nitrate

-Ethyl alcohol*-Potassium thiocyanate

-Ethyl alcohol*-Sodium bromide

-Ethyl alcohol*-Sodium iodide

-Ethyl bromide*

-Ethyl ether*

-Ethyl iodide*

-Ferric chloride*

-Fluorene*

-Formamide*

-Formic acid*

-Fumaric acid*

-Glycerol*

-Glycerol*-Lithium bromide

-Glycerol*-Potassium iodide

-Heptane*

-Hexahydrocresols*

-Hexahydrophenol*

-Hexane*

-Hydrogen bromide*

-Hydrogen chloride*

-Hydrogen sulfide*

-m-Hydroxybenzoic acid*

-Hydroxylamine hydrochloride*

-Iodine*

-Iodine*-Potassium iodide

-Isoamyl alcohol*

-Isobutane*

-Isobutyl alcohol*

-Isopentane*

-Isopropyl alcohol*

-Lauric acid*

-Lithium bromide*

-Lithium chloride*

-Lithium nitrate*

-Lithium perchlorate*

-Magnesium bromide*

-Magnesium iodide*

-Magnesium perchlorate*

-Maleic acid*

-Malic acid*

-Manganous chloride*

-Manganous nitrate*

-Mercuric bromide*

-Mercuric bromide*-Propyl alcohol

-Mercuric chloride*

-Mercuric chloride*-Propyl alcohol

Methyl alcohol.—(Continued)

-Mercuric cyanide*

-Mercuric cyanide*-Propyl alcohol

-Mercuric iodide*

-Mercuric iodide*-Propyl alcohol

-Mesaconic acid*

-Methyl chloride

Freezing point-solubility, **4**: 99

-Myristic acid

Heat of solution, **5**: 152

-Naphthalene

Boiling point elevation, **3**: 334Density, **3**: 151Dielectric constant, **6**: 102Freezing point-solubility, **4**: 100Freezing point-solubility in water, **4**: 400Heat of solution, **5**: 152Refractive index, **7**: 80- α -NaphtholDensity, **3**: 151Viscosity, **5**: 34- β -NaphtholDensity, **3**: 151- β -NaphthylamineFreezing point-solubility, **4**: 100

-Nickel chloride

Boiling point elevation, **3**: 334

-Nickel sulfate

Boiling point elevation, **3**: 334

-Nicotine

Density, **3**: 151

-Nitrobenzene

Density, **3**: 151Vapor pressure, **3**: 287Viscosity, **5**: 34

-Nitrobenzoic acids

Density, **7**: 79Heat of solution, **5**: 152Refractive index, **7**: 79

-o-Nitrophenol

Heat of solution, **5**: 151

-Nitrophenols

Density, **7**: 79Refractive index, **7**: 79

-Nitrophenylnitromethanes

Density, **7**: 79Refractive index, **7**: 79

-Oleic acid

Density, **3**: 152

-Oxalic acid

Heat of solution, **5**: 151

-Palmitic acid

Heat of solution, **5**: 152

-Pentane

Vapor pressure, **3**: 360

-Perchloric acid-Potassium perchlorate

Solubility relations, **4**: 211

-Phenanthrene

Freezing point-solubility, **4**: 101

-Phenetole

Density, **3**: 151Viscosity, **5**: 34

-Phenylhydrazine hydrochloride

Boiling point elevation, **3**: 333

-Phenylpropionic acid

Density, **3**: 151Viscosity, **5**: 34- β -Phenylpropionic acidDensity, **3**: 151Viscosity, **5**: 34

-Picric acid

Boiling point elevation, **3**: 333Viscosity, aqueous solution, **5**: 21

-Picryl chloride

Boiling point elevation, **3**: 333

-Piperidine

Viscosity, aqueous solution, **5**: 21

-Potassium acetate

Boiling point elevation, **3**: 334

* Data for system will be found under this compound in Index. Full explanation on page vii.

Methyl alcohol.—(Continued)**-Potassium bromide**Boiling point elevation, **3**: 334Density, **3**: 142Viscosity, **5**: 29**-Potassium chloride**Density, **3**: 141Freezing point-solubility in water, **4**: 400Viscosity, **5**: 29**-Potassium dinitrophenolates**Density, **7**: 79Refractive index, **7**: 79**-Potassium iodide**Boiling point elevation, **3**: 334Density, **3**: 142Freezing point-solubility, **4**: 205, 213Vapor pressure lowering, **3**: 300Viscosity, **5**: 29**-Potassium iodide-Propyl alcohol**Density, **3**: 143**-Potassium nitrophenolates**Density, **7**: 79Refractive index, **7**: 79**-Potassium perchlorate**Density, **3**: 142**-Potassium picrate**Freezing point-solubility in water, **4**: 400**-Potassium thiocyanate**Viscosity, aqueous solution, **5**: 24**-Propane**Vapor pressure, **3**: 360**-Propionic acid**Density, **7**: 79Freezing point-solubility, **4**: 100Refractive index, **7**: 79**-Propionic acid hydrochloride**Freezing point-solubility, **4**: 100**-Propyl alcohol**Density, **3**: 150Heat of solution, **5**: 155, 158Refractive index, **7**: 79Specific heat, **5**: 116, 126Surface tension, **4**: 471Vapor pressure, **3**: 287Viscosity, **5**: 34**-Propyl alcohol-Sodium bromide**Density, **3**: 143**-Propyl alcohol-Sodium iodide**Density, **3**: 143**-Pyridine**Heat of solution, **5**: 151Refractive index, **7**: 79**-Quinoline**Refractive index, **7**: 80**-Resorcinol**Heat of solution, **5**: 151**-Rubidium perchlorate**Density, **3**: 142**-Salicylic acid**Boiling point elevation, **3**: 333Heat of solution, **5**: 152**-Sodium acetate**Boiling point elevation, **3**: 334Density, **7**: 79Refractive index, **7**: 79**-Sodium benzoate**Density, **7**: 79Refractive index, **7**: 79**-Sodium bromide**Boiling point elevation, **3**: 334Density, **3**: 141Viscosity, **5**: 29**-Sodium butyrate**Density, **7**: 79Refractive index, **7**: 79**-Sodium chloride**Freezing point-solubility in water, **4**: 400**Methyl alcohol.—(Continued)****-Sodium 2, 4-dinitrophenate**Freezing point-solubility in water, **4**: 400**-Sodium iodide**Boiling point elevation, **3**: 334Density, **3**: 141Viscosity, **5**: 29Aqueous solution, **5**: 24**-Sodium metaantimoniate**Density, aqueous solutions, **4**: 400Freezing point-solubility in water, **4**: 400**-Sodium methylate**Boiling point elevation, **3**: 334**-Sodium nitrobenzoates**Density, **7**: 79Refractive index, **7**: 79**-Sodium perchlorate**Density, **3**: 141**-Sodium propionate**Density, **7**: 79Refractive index, **7**: 79**-Sodium valerate**Density, **7**: 79Refractive index, **7**: 79**-Strontium perchlorate**Density, **3**: 140**-Succinic acid**Density, **3**: 151Viscosity, **5**: 34**-Sulfur dioxide**Density, **3**: 135Freezing point-solubility, **4**: 212Viscosity, **5**: 27**-Terpine hydrate**Density, **3**: 152**-Tetraethylammonium iodide**Boiling point elevation, **3**: 334Density, **3**: 151**-Tetrahydronaphthalene**Density, **3**: 151Viscosity, **5**: 34**-Tetramethylammonium iodide**Density, **3**: 151Vapor pressure lowering, **3**: 300**-Tetrapropylammonium iodide**Density, **3**: 152**-Thymol**Density, **3**: 152**-Toluene**Dielectric constant, **6**: 102Heat of solution, **5**: 152**-Toluidine**Viscosity, aqueous solution, **5**: 21**-1, 3, 5-Trichlorobenzene**Boiling point elevation, **3**: 333**-Triethylsulfonium iodide**Boiling point elevation, **3**: 333**-Trinitro-*p*-xylene**Boiling point elevation, **3**: 334**-Triphenylmethane**Boiling point elevation, **3**: 334Heat of solution, **5**: 152Refractive index, **7**: 80**-Uranyl formate**Freezing point-solubility in water, **4**: 400**-Urea**Boiling point elevation, **3**: 333Density, **3**: 150Dielectric constant, **6**: 102Viscosity, **5**: 34**-Urethan**Boiling point elevation, **3**: 333Density, **3**: 150Dielectric constant, **6**: 102Freezing point-solubility, **4**: 172Heat of solution, **5**: 151**Methyl alcohol.—(Continued)****-Valeric acid**Density, **7**: 79Refractive index, **7**: 79**Methyl alcohol hydrochloride****-Propionic acid**Freezing point-solubility, **4**: 101**Methyl allocinnamate**Refractive index, **7**: 49Surface tension, **4**: 459**Methyl amyl ketone**Absorption spectra, **5**: 342Heat of vaporization, **5**: 137Viscosity, **7**: 219**Methyl anisate****-Trichloroacetic acid**Freezing point-solubility, **4**: 104**Methyl behenate****-Methyl isobehenate**Freezing point-solubility, **4**: 167**Methyl benzoate**Absorption spectra, **5**: 333, 343Birefringence, magnetic, **7**: 111Boiling point, **3**: 224Dielectric constant, **6**: 93Electrical conductivity, **6**: 145Heat of combustion, **5**: 167Magnetic susceptibility, **6**: 363Refractive index, **7**: 43Specific heat, **5**: 111Surface tension, **4**: 457Vapor pressure, **3**: 224Verdet constant, **6**: 429Viscosity, **7**: 219**-Azobenzene*****-Benzene*****-*p*-Dibromobenzene*****-Ethyl acetate*****-Ethyl benzoate*****-Ethyl chloroacetate*****-Ethyl ether*****-Ethyl trichloroacetate*****-Ethylene bromide*****-Methyl formate**Density, **3**: 157**-Naphthalene**Density, **3**: 191**-Nitrobenzene**Density, **3**: 177**-Phenanthrene**Density, **3**: 191**-Trichloroacetic acid**Freezing point-solubility, **4**: 103**Methyl benzoylacetate**Tautomerism, kinetics of, **7**: 119**Methyl benzyl ether****-Isoamyl acetate*****Methyl bromide**Birefringence, electric, **7**: 110Dielectric constant, **6**: 82Heat of combustion, **5**: 168Ionization by α -particles, **6**: 122Ionization by β -particles, **6**: 121Ionization by γ -rays, **6**: 123Ionization by X-rays, **6**: 123Ions, mobility of, in, **6**: 112Magnetic susceptibility, **6**: 361Refractivity, **7**: 10Solubility in non-aqueous liquids, **3**: 268Specific heat, gas, **5**: 80Thermal conductivity, gas, **5**: 214, 215Verdet constant, **6**: 428Viscosity, gas, **5**: 3**Methyl bromoallocinnamate (α -, β -)**Surface tension, **4**: 459**Methyl *p*-bromobenzoate**Cryoscopic constant, **4**: 183**Methyl bromocinnamate (α -, β -)**Surface tension, **4**: 459

* Data for system will be found under this compound in Index. Full explanation on page vii.

Methyl butyl ketone

Absorption spectra, **5**: 340
Heat of vaporization, **5**: 137
Magnetic susceptibility, **6**: 362
Specific heat, **5**: 110
Surface tension, **4**: 437, 455
Viscosity, **7**: 218

Methyl tert.-butyl ketone

Absorption spectra, **5**: 340
Dielectric constant, **6**: 91
Magnetic susceptibility, **6**: 362
Surface tension, **4**: 437

Methyl butyrate

Absorption spectra, **5**: 332, 338
Azeotropic mixtures, **3**: 320–321
Birefringence, electric, **7**: 111
Boiling point, **3**: 220
Compressibility, **3**: 36
Condensation on ions and nuclei, **6**: 117
Critical point data, **3**: 242, 248
Density, **3**: 29, 33
Dielectric constant, **6**: 88
Diffusion of vapor in gases, **5**: 62
Electrical conductivity, **6**: 145
Flash point, **2**: 162
Heat of vaporization, **5**: 137
Orthobaric density, **3**: 242
Solubility in water, **3**: 388
Specific heat, **5**: 109
Surface tension, **4**: 452
Aqueous solution, **4**: 469
Thermal conductivity, **5**: 228
Vapor pressure, **3**: 220
Vapor pressure above 1 atm., **3**: 242
Verdet constant, **6**: 429
Viscosity, **5**: 28; **7**: 216
-Azobenzene*
-Benzene*
-Benzene*-Methyl propionate-Toluene
-Benzene*-Propyl acetate-Toluene
-Chlorobenzene*
-p-Dibromobenzene*
-Ethyl alcohol*
-Ethyl chloroacetate*
-Naphthalene
Density, **3**: 172
-Phenanthrene
Density, **3**: 172
-Stannic chloride
Density, **3**: 138
Viscosity, **5**: 28

Methyl camphorcarboxylate

Absorption spectra, **5**: 349
-Benzene*

Methyl carbamate

Cryoscopic constant, **4**: 183
Viscosity, **7**: 214

Methyl carbinols

Optical rotatory power, **7**: 360

Methyl chloride

Absorption spectra, **5**: 331
Birefringence, electric, **7**: 110
Boiling point, **3**: 215, 231
Compressibility, **3**: 14
Critical point data, **3**: 231, 248
Decomposition pressure of hydrate, **7**: 244
Density, gas, **3**: 3
Dielectric constant, **6**: 82
Heat of adsorption on charcoal, **5**: 140
Heat of adsorption on meerschaum, **5**: 141
Heat of combustion, **5**: 168
Heat of vaporization, **5**: 136
Magnetic susceptibility, **6**: 361
Orthobaric density, **3**: 231
Refractivity, **7**: 10
Rubber, permeability of, **2**: 272; **5**: 76
Solidification point, **1**: 61
Solubility in hydrochloric acid, **3**: 281
Solubility in non-aqueous liquids, **3**: 268
Solubility in water, **3**: 261

Methyl chloride.—(Continued)

Specific heat, gas, **5**: 80, 83
Surface tension, **4**: 448
Thermal conductivity, gas, **5**: 214, 215
Vapor pressure, **3**: 215
Vapor pressure above 1 atm., **3**: 231
Verdet constant, **6**: 426
Dispersion, **6**: 433
Viscosity
Gas, **5**: 3
Liquid, **5**: 33
-Carbon dioxide*
-Hydrogen bromide*
-Hydrogen chloride*
-Methyl alcohol*
-Methyl ether
Freezing point-solubility, **4**: 99
-Sulfur dioxide
P-V-T relation, **3**: 17
Vapor pressure, **3**: 354, 381

Methyl chloroacetate

Dielectric constant, **6**: 85
Specific heat, **5**: 108

Methyl chloroaminoacetic acid

Density, aqueous solution, **3**: 63

1-Methyl-4-chloroanthracene

-Quinoline
Density, **7**: 88
Refractive index, **7**: 88
Dispersion, **7**: 107

Methyl cinnamate

Cryoscopic constant, **4**: 184
Heat of fusion, **5**: 134
Refractive index, **7**: 49
Surface tension, **4**: 460
-Chloroacetic acid*
-Trichloroacetic acid
Freezing point-solubility, **4**: 104

Methyl cyanide. See Acetonitrile.**Methyl cyanoacetate**

Dielectric constant, **6**: 86
Electrical conductivity, **6**: 143
Aqueous solution, **6**: 266
Surface tension, **4**: 450
-Acetone*
-Acetonitrile*
-Potassium iodide
Density, **3**: 142
-Propionitrile
Boiling point elevation, **3**: 338
-Tetraethylammonium iodide
Density, **3**: 165

Methyl cyanobutyrylacetate

Electrical conductivity, aqueous solution, **6**: 287
Refractive index, **7**: 44

Methyl diamyl ether

Birefringence, electric, **7**: 111

Methyl dibenzoylglycerate

-Acetic acid*
-Benzene*
-Ethylene bromide*
-Nitrobenzene
Density, **3**: 178

Methyl di-(o-bromobenzoyl)-tartrate

-Ethyl alcohol*
-Pyridine
Density, **3**: 172

Methyl di(m-bromobenzoyl)-tartrate

-Ethyl alcohol*

Methyl di(p-bromobenzoyl)-tartrate

-Ethyl alcohol*

Methyl dichloroacetate, specific heat, 5:107**Methyl di(chlorobenzoyl)-tartrate (o-, m-, p-)**

-Ethyl alcohol*

Methyl diethylacetoacetate

Viscosity, **7**: 220

Methyl dimethylacetoacetate

Refractive index, **7**: 42
Saponification, kinetics of, **7**: 131

Methyl dipropylacetate, viscosity, 7: 220**Methyl di-p-toluylglycerate**

-Acetone*

-Ethyl alcohol*

Methyl di-(trichloroacetyl)-tartrate

-Nitrobenzene

Density, **3**: 177

Methyl ecgoninate

Optical rotatory power, **7**: 431
Refractive index, **7**: 53

Methyl ether

Absorption spectra, **5**: 331
Boiling point, **3**: 217
Critical point data, **3**: 238, 248
Density, gas, **3**: 3
Dielectric constant, **6**: 82
Explosion in closed vessels, **2**: 191
Flash point, **2**: 161
Freezing point lowering of aqueous solution, **4**: 262
Heat of combustion, **5**: 167
Heat of solution in water, **5**: 148
Magnetic susceptibility, **6**: 361
Orthobaric density, **3**: 238
Refractivity, **7**: 10
Solubility in vegetable oils, **3**: 269
Specific heat, gas, **5**: 80
Surface tension, **4**: 441
Thermal expansion, **3**: 16
Vapor pressure, **3**: 217
Vapor pressure above 1 atm., **3**: 238

-Acetylene*

-Ammonia*

-Carbon dioxide*

-Chloroform*

-Ethylene*

-Hydrogen bromide*

-Hydrogen chloride*

-Hydrogen iodide*

-Hydrogen sulfide*

-Methyl chloride*

-Nitrous oxide

Freezing point-solubility, **4**: 189

-Sulfur dioxide

Freezing point-solubility, **4**: 187

P-V-T relations, **3**: 17

Vapor pressure, **3**: 285

Methyl ethyl ether

Boiling point, **3**: 218
Critical point data, **3**: 240, 248
Heat of combustion, **5**: 167
Orthobaric density, **3**: 240
Surface tension, **4**: 450
Vapor pressure, **3**: 218
Vapor pressure above 1 atm., **3**: 240

Methyl ethyl ketone

Absorption spectra, **5**: 332, 337
Azeotropic mixtures, **3**: 318, 320–321
Birefringence, electric, **7**: 111
Boiling point, **3**: 218
Density, **3**: 28, 33
Dielectric constant, **6**: 87
Electrical conductivity, **6**: 143
Heat of combustion, **5**: 167
Heat of vaporization, **5**: 137
Inflammability, limits of, **2**: 180
Magnetic susceptibility, **6**: 361
Polarization of light scattered by
Gas, **5**: 266
Liquid, **5**: 266
Refractive index, **7**: 36
Solubility in water, **3**: 387
Pressure, effect of, **3**: 393
Specific heat, **5**: 108
Surface tension, **4**: 450
Vapor pressure, **3**: 218
Aqueous solution, **3**: 291
Viscosity, **7**: 215
X-rays, absorption coefficient, **6**: 14, 16
-Acetone*

Methyl ethyl ketone.—(Continued)

-Ethyl alcohol*

-Glycerol*

Methyl ethyl ketoximeDielectric constant, **6**: 87Heat of vaporization, **5**: 137Specific heat, **5**: 108Surface tension, **4**: 451**Methyl ethyl sulfide, critical point data, 3:**

248

Methyl ethylpropylacetoacetate, viscosity, 7:

221

Methyl fluorideBoiling point, **3**: 216Critical point data, **3**: 245, 248Density, gas, **3**: 3Refractivity, **7**: 10Vapor pressure, **3**: 216Vapor pressure above 1 atm., **3**: 245**Methyl formate**Absorption spectra, **5**: 335Azeotropic mixtures, **3**: 318–320, 324Boiling point, **3**: 217, 335Critical point data, **3**: 238, 248Density, **3**: 28, 33Dielectric constant, **6**: 82, 84Diffusion of vapor in air, **5**: 62Electrical conductivity, **6**: 145Freezing point lowering of aqueous solution, **4**: 262Heat of combustion, **5**: 167Heat of solution in water, **5**: 148Heat of vaporization, **5**: 136Magnetic susceptibility, **6**: 361Orthobaric density, **3**: 238Polarization of light scattered by
Gas, **5**: 265Liquid, **5**: 266Saponification, kinetics of, **7**: 134Solubility in water, **3**: 387Specific heat, **5**: 107Surface tension, **4**: 448Aqueous solution, **4**: 467Vapor pressure, **3**: 217Aqueous solution, **3**: 364Vapor pressure above 1 atm., **3**: 238Verdet constant, **6**: 428Viscosity, **7**: 213X-rays, absorption coefficient, **6**: 13, 16

-Benzene*

-Benzil*

-Cadmium iodide*

-Carbon disulfide*

-p-Dibromobenzene*

-Ethyl acetate*

-Ethyl acetoacetate*

-Ethyl chloroacetate*

-Ethyl ether*

-Ethyl oleate*

-Ethyl trichloroacetate*

-Hexane*

-Methyl benzoate*

-Naphthalene

Density, **3**: 157

-Phenanthrene

Density, **3**: 157

-Stannic chloride

Freezing point-solubility, **4**: 197

-Tetraethylammonium iodide

Density, **3**: 157**Methyl hexyl ketone**Absorption spectra, **5**: 333, 344Azeotropic mixtures, **3**: 323Dielectric constant, **6**: 94Heat of combustion, **5**: 167Heat of vaporization, **5**: 137Magnetic susceptibility, **6**: 363Refractive index, **7**: 45Specific heat, **5**: 112Surface tension, **4**: 437, 458**Methyl hexylpropiolate**Refractive index, **7**: 52Verdet constant, **6**: 430**Methyl hydrogen camphorate**Electrical conductivity, aqueous solution, **6**: 299Optical rotatory power, **7**: 447**Methyl hydrogen sulfate, electrical conductivity, aqueous solution, 6:**

261

Methyl hydrogen tartrateElectrical conductivity, aqueous solution, **6**: 270Optical rotatory power, **7**: 381**Methyl β-hydroxy-β-phenylpropionate**Surface tension, **4**: 460**Methyl iodide**Absorption spectra, **5**: 331, 335Azeotropic mixtures, **3**: 319Birefringence, **7**: 110Boiling point, **3**: 216, 333Compressibility, **3**: 39Density, **3**: 28Dielectric constant, **6**: 82, 83Electrical conductivity, **6**: 143Electrons excited by X-rays, number of, **6**: 5Heat of combustion, **5**: 168Heat of vaporization, **5**: 136Ionization of vapor by α-particles, **6**: 122Ionization by β-particles, **6**: 121Ionization of vapor by γ-rays, **6**: 123Ionization of vapor by X-rays, **6**: 123Ions, mobility of, in, **6**: 112Ions, recombination of, in, **6**: 115Magnetic susceptibility, **6**: 361Photochemical oxidation, **7**: 163, 165

Refractive index

Gas, **7**: 10Liquid, **7**: 12, 34Solubility in water, **3**: 387Specific heat, gas, **5**: 80Surface tension, **4**: 448Thermal conductivity, gas, **5**: 214, 215Vapor pressure, **3**: 216Verdet constant, **6**: 427, 428Viscosity, **5**: 32; **7**: 213X-rays, absorption coefficient, **6**: 13, 16

-Acetone*

-Air*

-Benzene*

-Benzene*-Ethyl iodide

-Benzil*

-Benzoic acid*

-Camphor*

-Carbon disulfide*

-Carbon tetrachloride*

-Chloral alcoholate*

-Diethyl tartrate*

-Diphenylamine*

-Ethyl acetate*

-Ethyl alcohol*

-Ethyl ether*-Iodine

-Ethyl iodide*

-Ethyl iodide*-Xylene

-Hydrogen*

-Hydrogen peroxide*

-Iodine*

-Propyl alcohol

Density, **3**: 149

-Pyridine

Mutual solubility, **3**: 395**Methyl isoamyl ether**Surface tension, **4**: 455**Methyl isobehenate**

-Methyl behenate*

Methyl isobutyl etherAbsorption spectra, **5**: 332Viscosity, **7**: 217**Methyl isobutyl ketone**Absorption spectra, **5**: 332, 340, 372Magnetic susceptibility, **6**: 362**Methyl isobutyl ketone.**—(Continued)Refractive index, **7**: 40Specific heat, **5**: 110Viscosity, **7**: 218**Methyl isobutyrate**Absorption spectra, **5**: 332Azeotropic mixtures, **3**: 320Boiling point, **3**: 220Compressibility, **3**: 36Condensation on ions and nuclei, **6**: 117Critical point data, **3**: 243, 248Density, **3**: 29Diffusion of vapor in gases, **5**: 62Heat of vaporization, **5**: 137Orthobaric density, **3**: 243Surface tension, **4**: 452Vapor pressure, **3**: 220Vapor pressure above 1 atm., **3**: 243Viscosity, **7**: 216**Methyl isocyanate**Absorption spectra, **5**: 335Heat of combustion, **5**: 167**Methyl isopropyl ketone**Absorption spectra, **5**: 338Heat of combustion, **5**: 167Heat of vaporization, **5**: 137Refractive index, **7**: 37Specific heat, **5**: 109**Methyl isothiocyanate**Absorption spectra, **5**: 331Dielectric constant, **6**: 84Electrical conductivity, **6**: 143Heat of combustion, **5**: 169

-Camphene*

-Camphor*

-Naphthalene

Freezing point-solubility, **4**: 107**Methyl isovalerate**Absorption spectra, **5**: 332Azeotropic mixtures, **3**: 321Compressibility, **3**: 36Heat of vaporization, **5**: 137Surface tension, **4**: 455

-Ethyl alcohol*

Methyl lactateAzeotropic mixtures, **3**: 319Density, **3**: 28

-Nitrobenzene

Density, **3**: 167

-Tetrachloroethane

Density, **3**: 153**Methyl laurate, viscosity, 7:**

221

Methyl lignocerate

-Methyl tetracosanate

Freezing point-solubility, **4**: 167**Methyl d-mandelate**

-Methyl l-mandelate

Freezing point-solubility, **4**: 154**Methyl mesityloxidooxalate**Tautomerism, kinetics of, **7**: 119**Methyl o-methoxybenzoate**Dielectric absorption, **6**: 94Dielectric constant, **6**: 94Refractive index, **7**: 46**Methyl α-methoxyisobutyrate**Magnetic susceptibility, **6**: 362**Methyl o-methoxyphenylacrylate**Verdet constant, **6**: 430**Methyl l-α-methoxypropionate**

-Nitrobenzene

Density, **3**: 172

-Tetrachloroethane

Density, **3**: 154**Methyl methylacetoacetate**Refractive index, **7**: 39Surface tension, **4**: 455**Methyl methylpropylacetoacetate**Viscosity, **7**: 220**Methyl mono(trichloroacetyl)tartrate**

-Nitrobenzene

Density, **3**: 177

* Data for system will be found under this compound in Index. Full explanation on page vii.

Methyl nitrate

- Dielectric constant, **6**: 83
- Electrical conductivity, **6**: 143

Methyl octoate, viscosity, 7: 220**4-Methyl opianate, heat of combustion, 5: 166****Methyl orthosilicate, specific heat, 5: 106****Methyl phenyl ether. See Anisole.****Methyl phenylpropiolate**

- Heat of fusion, **5**: 134
- Magnetic susceptibility, **6**: 363
- Refractive index, **7**: 49
- Verdet constant, **6**: 430

Methyl phosphate, saponification constants, 7: 137**Methyl pinabietate****-Ethyl alcohol*****Methyl propionate**

- Absorption spectra, **5**: 332, 337
- Azeotropic mixtures, **3**: 318, 320, 321
- Boiling point, **3**: 219
- Critical point data, **3**: 241, 248
- Density, **3**: 28
 - Aqueous solution, **3**: 114
- Dielectric constant, **6**: 87
- Diffusion of vapor in gases, **5**: 62
- Electrical conductivity, **6**: 145
- Flash point, **2**: 162
- Heat of combustion, **5**: 167
- Heat of vaporization, **5**: 137
- Magnetic susceptibility, **6**: 361
- Orthobaric density, **3**: 241
- Refractive index
 - Gas, **7**: 10
 - Liquid, **7**: 36
- Solubility in water, **3**: 388
- Specific heat, **5**: 108
- Surface tension, **4**: 451
 - Aqueous solution, **4**: 468
- Vapor pressure, **3**: 219
 - Aqueous solution, **3**: 364
- Vapor pressure above 1 atm., **3**: 241
- Verdet constant, **6**: 428
- Viscosity
 - Gas, **5**: 3
 - Liquid, **7**: 215

X-rays, absorption coefficient, 6: 14**-Amyl hydrocinnamate*****-Azobenzene*****-Benzene*****-Benzene*-Ethyl lactate-Toluene****-Benzene*-Methyl butyrate-Toluene****-Benzene*-Toluene****-p-Dibromobenzene*****-Ethyl alcohol*****-Naphthalene****Density, 3: 167****-Toluene****Surface tension, 4: 473****Methyl propyl ether****Absorption spectra, 5: 332****Boiling point, 3: 219****Vapor pressure, 3: 219****Viscosity, 7: 216****Methyl propyl ketone****Absorption spectra, 5: 338****Azeotropic mixtures, 3: 319-321, 323****Boiling point, 3: 343****Density, 3: 29, 33****Dielectric constant, 6: 88****Electrical conductivity, 6: 144****Heat of combustion, 5: 167****Magnetic susceptibility, 6: 362****Polarization of light scattered by****Gas, 5: 266****Liquid, 5: 267****Refractive index, 7: 37****Surface tension, 4: 436, 452****Viscosity, 7: 216****-Benzil*****-Benzoic acid*****Methyl propyl ketoxime****Dielectric constant, 6: 89****Surface tension, 4: 452****Methyl propylacetoacetate, viscosity, 7: 219****Methyl salicylate****Absorption spectra, 5: 333****Boiling point, 3: 224****Dielectric absorption, 6: 93****Dielectric constant, 6: 93****Diffusion in benzene, 5: 74****Diffusion in methyl alcohol, 5: 73****Heat of combustion, 5: 167****Magnetic susceptibility, 6: 363****Refractive index, 7: 41, 43****Solubility in water, 3: 392****Surface tension, 4: 457****Aqueous solution, 4: 470****Vapor pressure, 3: 224****Verdet constant, 6: 429****-Cineole*****-Ethyl alcohol*****-Ethyl ether*****Methyl sulfide****Absorption spectra, 5: 335****Boiling point, 3: 217, 338****Critical point data, 3: 238, 248****Dielectric constant, 6: 85****Heat of combustion, 5: 169****Magnetic susceptibility, 6: 361****Orthobaric density, 3: 238****Polarization of light scattered by, 5: 266****Surface tension, 4: 449****Vapor pressure, 3: 217****Vapor pressure above 1 atm., 3: 238****Viscosity, 7: 214****-Cadmium iodide*****-Diphenylamine*****-Mercuric chloride*****-Mercuric iodide*****-Zinc bromide****Boiling point elevation, 3: 338****-Zinc chloride****Boiling point elevation, 3: 338****-Zinc iodide****Boiling point elevation, 3: 338****Methyl tetracosanate****-Methyl lignocerate*****Methyl thiocyanate****Boiling point, 3: 334****Dielectric constant, 6: 84****Electrical conductivity, 6: 143****Heat of combustion, 5: 169****Refractive index, 7: 34****Surface tension, 4: 448****-Benzil*****-Dimethyl tartrate*****-Diphenylamine*****-Phenanthrene****Boiling point elevation, 3: 335****-Tetraethylammonium iodide****Density, 3: 154****-Triphenylmethane****Boiling point elevation, 3: 335****Methyl p-toluate****Cryoscopic constant, 4: 183****Dielectric constant, 6: 94****-Trichloroacetic acid****Freezing point-solubility, 4: 104****Methyl tolyl ether (o-, m-, p-)****Dielectric constant, 6: 93****-Benzene*****-Isoamyl acetate*****Methyl trichloroacetate****Specific heat, 5: 107****Methyl valerate****Absorption spectra, 5: 332, 340****Compressibility, 3: 36****Critical point data, 3: 249****Dielectric constant, 6: 91****Diffusion of vapor in air, 5: 62****Methyl valerate.—(Continued)****Electrical conductivity, 6: 145****Heat of vaporization, 5: 137****Specific heat, 5: 110****Thermal conductivity, 5: 228****Verdet constant, 6: 426****Dispersion, 6: 433****Viscosity, 7: 218****Methylacetamide****-Pyridine****Density, 3: 164****Viscosity, 5: 40****Methylacetanilide****Absorption spectra, 5: 345****Boiling point elevation in aqueous solution, 3: 327****Crystallography, 1: 329****Surface tension, 4: 459****Viscosity, 7: 220****-Acetone*****-Benzene*****-Chloroform*****-Ethyl alcohol*****-Ethyl ether*****Methylacetophenone (o-, m-, p-)****Refractive index, 7: 46****Methylacetylacetone****Absorption spectra, 5: 340, 371****Magnetic susceptibility, 6: 362****Refractive index, 7: 39****Surface tension, 4: 454****1-Methyl-2-acetylnaphthalene****-Quinoline****Density, 7: 87****Refractive index, 7: 87****Dispersion, 7: 107****Methylacridine****-Acridine*****-Anthracene*****Methylal****Absorption spectra, 5: 336****Azeotropic mixtures, 3: 318-319****Birefringence, electric, 7: 111****Boiling point, 3: 218, 340****Critical temperature, 3: 248****Density, aqueous solution, 3: 114****Dielectric constant, 6: 86****Heat of combustion, 5: 167****Heat of solution in water, 5: 148****Heat of vaporization, 5: 137****Magnetic susceptibility, 6: 361****Refractive index, 7: 35, 78****Solubility in water, 3: 393****Specific heat****Gas, 5: 80****Liquid, 5: 108****Surface tension, 4: 450****-Benzil*****-Benzoic acid*****-Camphor*****-Carbon disulfide*****-Carbon disulfide*-Naphthalene****-Carbon disulfide*-Picric acid****-Formanilide*****-Iodine*****-Isobutyl acetate*****-Magnesium bromide*****-Menthol*****-Naphthalene****Boiling point elevation, 3: 340****Methylallylaniline, viscosity, 7: 220****Methylamine****Absorption spectra, 5: 335****Critical point data, 3: 237, 248****Density****Aqueous solution, 3: 113****Gas, 3: 3****Dielectric constant, 6: 82, 83****Electrical conductivity, 6: 143****Aqueous solution, 6: 261****Heat of combustion, 5: 167**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Methylamine.—(Continued)

- Heat of formation, **5**: 182
 Heat of solution in water, **5**: 148
 Magnetic susceptibility, **6**: 361
 Solubility in water, **3**: 261
 Surface tension, **4**: 441, 448
 Thermal conductivity, gas, **5**: 214
 Vapor pressure, **3**: 216
 Vapor pressure above 1 atm., **3**: 237
 Viscosity
 Aqueous solution, **5**: 20
 Liquid, **7**: 213
 -Amyl alcohol*
 -Chloroform*
 -2, 4-Dinitroaniline*
 -Ethyl ether*
 -Lithium chloride*
 -*m*-Methoxybenzenesulfonamide*
 -Potassium iodide
 Density, **3**: 142
 Viscosity, **5**: 29
 -Silver iodide
 Density, **3**: 139
 Viscosity, **5**: 28
 -Silver nitrate
 Density, **3**: 139
 Viscosity, **5**: 28
 -Sodium nitrate
 Density, **3**: 141
 Viscosity, **5**: 29
 -Sucrose
 Viscosity, **5**: 35
 -Urea
 Density, **3**: 150
 Viscosity, **5**: 34
 -Xylene
 Distribution coefficients in water, **3**: 423
 -Zinc hydroxide
 Solubility in water, **7**: 256
Methylamine carbonate
 Heat of formation, **5**: 182
Methylammonium chloride
 Absorption spectra, **5**: 335
 Boiling point elevation in aqueous solution, **3**: 327
 Density, aqueous solution, **3**: 62, 113
 Electrical conductivity, aqueous solution, **6**: 243
 Heat of formation, **5**: 182
 Vapor pressure lowering in aqueous solution, **3**: 293
 Viscosity, aqueous solution, **5**: 13
 -Sulfur dioxide
 Boiling point elevation, **3**: 328
Methylammonium hydroxide
 Viscosity, aqueous solution, **5**: 13
Methylamylcarbinol, viscosity, **7**: 219
Methylaniline
 Absorption spectra, **5**: 333, 342
 Azeotropic mixtures, **3**: 322
 Boiling point, **3**: 223
 Compressibility, **3**: 37
 Critical point data, **3**: 249
 Density, **3**: 29, 33
 Dielectric constant, **6**: 92
 Heat of combustion, **5**: 168
 Heat of vaporization, **5**: 137
 Magnetic susceptibility, **6**: 362
 Refractive index, **7**: 41
 Specific heat, **5**: 111
 Surface tension, **4**: 456
 Vapor pressure, **3**: 223
 Verdet constant, **6**: 429
 Viscosity, **5**: 40; **7**: 218
 -Allyl thiocyanate*
 -Benzyl chloride*
 -Diethyl tartrate*
 -Ethyl alcohol*
 -Glycerol*

Methylaniline.—(Continued)

- Nitrobenzene
 Density, **3**: 177
 Specific heat, **5**: 128
 Surface tension, **4**: 473
 -Xylene
 Distribution coefficients in water, **3**: 430
Methylaniline hydrobromide
 -Chloroform*
Methylaniline hydrochloride
 -Chloroform*
Methylanthracene (α -, β -)
 Photoconductivity, **6**: 66
 -Quinoline
 Density, **7**: 88
 Refractive index, **7**: 88
 Dispersion, **7**: 107
9-Methylanthracene
 -Quinoline
 Density, **7**: 88
 Refractive index, **7**: 88
 Dispersion, **7**: 107
Methylarsine dichloride
 Vapor pressure, **3**: 215
Methylarsonic acid
 Electrical conductivity, aqueous solution, **6**: 261
 Refractive index, **7**: 29
Methylbenzylaniline
 Magnetic susceptibility, **6**: 363
Methylbenzylcarbinyl esters
 Optical rotatory power, **7**: 361
2-Methylbutane
 Birefringence, electric, **7**: 111
 Density, **3**: 29, 33
2-Methyl-2-butene
 Azeotropic mixtures, **3**: 319
 Dielectric constant, **6**: 82
 Polarization of light scattered by
 Gas, **5**: 266
 Liquid, **5**: 266
 Viscosity, **7**: 216
Methylbutylcarbinol, viscosity, **7**: 218
Methylchavicol
 Absorption spectra, **5**: 346
 Refractive index, **7**: 50
 -Toluene
 Boiling point elevation, **3**: 346
Methylchlorosilicane
 Vapor pressure, **3**: 216
Methylcinnamic acid (α -, β -)
 Absorption spectra, **5**: 346
 Heat of combustion, **5**: 166
Methylcoumarinic acid
 Heat of combustion, **5**: 166
Methylcresol (*o*-, *m*-, *p*-)
 Photoluminescence, **5**: 387
Methylcyclobutane
 Heat of combustion, **5**: 163
Methylcycloheptane
 Heat of combustion, **5**: 163
1-Methylcyclohexan-1, 2-diol
 Heat of combustion, **5**: 164
Methylcyclohexane
 Absorption spectra, **5**: 333, 342
 Azeotropic mixtures, **3**: 319–321
 Birefringence, electric, **7**: 111
 Boiling point, **3**: 223
 Heat of combustion, **5**: 163
 Heat of vaporization, **5**: 137
 Melting point, **1**: 54
 Solidification point, **1**: 61
 Viscosity, **7**: 219, 223
 -Aniline*
 -Dimethyldodecahydronaphthalenes*
 -Hydrogen bromide*
 -Methyldodecahydronaphthalenes
 Vapor pressure, **3**: 290

Methylcyclohexane.—(Continued)

- m*-Nitrotoluene
 Density, **7**: 86
 Refractive index, **7**: 86
 Dispersion, **7**: 105
 -*m*-Toluidine
 Density, **7**: 86
 Refractive index, **7**: 86
 Dispersion, **7**: 105
Methylcyclohexanecarboxylic acids
 Electrical conductivity, aqueous solution, **6**: 288
1-Methylcyclohexanol
 Birefringence, electric, **7**: 111
 Refractive index, **7**: 42
1-Methylcyclohexan-3-ol
 Optical rotatory power, **7**: 420
 Refractive index, **7**: 42
2-Methylcyclohexanol
 Birefringence, electric, **7**: 111
 Heat of combustion, **5**: 164
3-Methylcyclohexanol
 Birefringence, electric, **7**: 111
2-Methylcyclohexanone
 Absorption spectra, **5**: 342
 Density, **3**: 29
 Magnetic susceptibility, **6**: 362
 Refractive index, **7**: 41
 Specific heat, **5**: 111
 Viscosity, **7**: 218
 -Cyclohexane*
3-Methylcyclohexanone
 Absorption spectra, **5**: 342
 Magnetic susceptibility, **6**: 362
 Refractive index, **7**: 41
 Specific heat, **5**: 111
 Viscosity, **7**: 218
4-Methylcyclohexanone
 Absorption spectra, **5**: 342
 Density, **3**: 29
 Magnetic susceptibility, **6**: 362
 Refractive index, **7**: 41
 Specific heat, **5**: 111
 Viscosity, **7**: 219
1-Methyl-1-cyclohexene
 Heat of combustion, **5**: 163
 Refractive index, **7**: 41
1-Methyl-3-cyclohexene
 Heat of combustion, **5**: 163
Methylcyclopentane
 Absorption spectra, **5**: 340
 Heat of combustion, **5**: 163
 Viscosity, **7**: 218
 -Aniline*
 β -Methylcyclopentanol
 Heat of combustion, **5**: 164
Methyldodecahydronaphthalenes
 -Cyclohexane*
 -1, 3-Dimethylcyclohexane*
 -Methylcyclohexane*
Methyldodecylcarbinol
 Verdet constant, dispersion of, **6**: 434
Methyldichlorosilicane
 Vapor pressure, **3**: 216
Methyldiethylcarbinol
 Absorption spectra, **5**: 332
 Heat of combustion, **5**: 164
Methyldiphenoxyphosphine oxide
 Magnetic susceptibility, **6**: 363
 -Triphenyl phosphate
 Freezing point-solubility, **4**: 163
Methyldiphenylamine
 Refractive index, **7**: 59
 Verdet constant, **6**: 431
 Viscosity, **7**: 221
Methyldiphenyltriazine
 Magnetic susceptibility, **6**: 364
Methyldipropylcarbinol
 Heat of combustion, **5**: 164

* Data for system will be found under this compound in Index. Full explanation on page vii.

Methylene bromide

Absorption spectra, **5**: 331, 334
 Magnetic susceptibility, **6**: 361
 Solubility in water, **3**: 387
 Vapor pressure, **3**: 215
 Verdet constant, **6**: 428
 Viscosity, **7**: 213

Methylene chloride

Absorption spectra, **5**: 331, 334
 Birefringence, electric, **7**: 110
 Dielectric constant, **6**: 82
 Heat of combustion, **5**: 168
 Heat of vaporization, **5**: 136
 Magnetic susceptibility, **6**: 361
 Polarization of light scattered by, **5**: 266
 Solidification point, **1**: 61
 Solubility in water, **3**: 387
 Sound, velocity of, in vapor, **6**: 462
 Specific heat, **5**: 107
 Surface tension, **4**: 436, 448
 Thermal conductivity, **5**: 214, 215
 Vapor pressure, **3**: 215
 Verdet constant, **6**: 428
 Viscosity, **7**: 213
 -Acetone*
 -Benzene*
 -Chloroform*
 -Diethyl tartrate*

Methylene diethyl ether

Critical temperature, **3**: 248

Methylene iodide

Absorption spectra, **5**: 331, 334
 Allotropic forms, **4**: 14
 Birefringence, magnetic, **7**: 110
 Cryoscopic constant, **4**: 183
 Dielectric constant, **6**: 83
 Diffusion in methyl alcohol, **5**: 72
 Heat of combustion, **5**: 168
 Magnetic susceptibility, **6**: 361
 Melting point under pressure, **4**: 14, 17
 Refractive index, **7**: 34, 79
 Surface tension, **4**: 436, 448
 Triple points, **4**: 14
 Verdet constant, **6**: 427
 -Antimony triiodide*
 -Arsenous iodide*
 -Benzene*
 -Benzene*-Iodine
 -Benzene*-Iodoform
 -Bismuth iodide*
 -Bromoform*
 -Carbon disulfide*
 -Cyclohexane*
 -Diethyl oxalate*
 -Diethyl tartrate*
 -Disoamyl*
 -Ethyl alcohol*
 -Hexane*
 -Iodine*
 -Iodine*-Iodoform
 -Iodine*-Iodoform-Xylene
 -Iodine*-Xylene
 -Iodoform*-Xylene
 -Isobutyl alcohol*
 -Isopropyl alcohol*
 -Mercuric iodide*
 -Propyl alcohol
 Solubility, mutual, **3**: 397
 -Selenium
 Density, **3**: 132
 -Stannic iodide
 Density, **3**: 138
 -Su'fur
 Freezing point-solubility, **4**: 34
 -Xylene
 Density, **3**: 148

Methylenecyclohexane

Heat of combustion, **5**: 163

Methylenediisonitramine methyl ester

Pyroelectricity, **6**: 209

Methylethylacetic acid

Electrical conductivity, aqueous solution, **6**: 270
 Viscosity, **7**: 216

Methylethylaniline

Absorption spectra, **5**: 333
 Viscosity, **7**: 220

p-Methylethylbenzene

Refractive index, **7**: 47
 -Quinoline
 Density, **7**: 87
 Refractive index, **7**: 87
 Dispersion, **7**: 106

1-Methyl-4-ethylcyclohexa-1, 3-diene

Heat of combustion, **5**: 163

1-Methyl-3-ethylcyclohexan-3-ol

Heat of combustion, **5**: 164

Methylethylmalonic acid

Decomposition, kinetics of, **7**: 122
 Electrical conductivity, aqueous solution, **6**: 275

Heat of combustion, **5**: 165

1-Methyl-2-ethylnaphthalene

Refractive index, **7**: 59
 -Quinoline
 Density, **7**: 88
 Refractive index, **7**: 88
 Dispersion, **7**: 107

 α -Methylgalactoside

Crystallography, **1**: 327
 Refractive index, **7**: 30

 α -Methylglucoside

Compressibility, aqueous solution, **3**: 440
 Crystallography, **1**: 327
 Density, aqueous solution, **3**: 112; **7**: 69
 Electrical conductivity, aqueous solution, **6**: 283, 284
 Freezing point lowering of aqueous solution, **4**: 263
 Optical rotatory power, **7**: 354, 390
 Osmotic pressure, **4**: 430
 Refractive index, **7**: 30
 Aqueous solution, **7**: 69
 Synthesis by enzymes, **7**: 155
 Vapor pressure lowering in aqueous solution, **3**: 293

 α -Methylglutaric acid

Electrical conductivity, aqueous solution, **6**: 276
 Heat of combustion, **5**: 165

Methylglyoxal

Absorption spectra, **5**: 365, 374

Methylglyoxime, freezing point lowering of aqueous solution, 4: 262**2-Methylheptane**

Compressibility, **3**: 37
 Heat of combustion, **5**: 163
 Surface tension, **4**: 458

4-Methylheptane

Heat of vaporization, **5**: 137

Methylheptenone

Absorption spectra, **5**: 374

Methylheptylcarbinol

Verdet constant, dispersion of, **6**: 434
 Viscosity, **7**: 220

2-Methylhexane

Heat of combustion, **5**: 163
 Viscosity, **7**: 219

3-Methylhexane

Heat of combustion, **5**: 163

Methylhexylcarbinol

Refractive index, **7**: 45
 Surface tension, **4**: 437, 458, 459
 -Diethyl tartrate*

4-Methylhydrouacil

Heat of combustion, **5**: 167

3-Methyl-2-hydroxyisopropylbenzene

Density, **3**: 30

 β -Methylhydroxylamine

Refractive index, **7**: 34

 α -Methylindole

Heat of combustion, **5**: 168

3-Methylindole

Heat of combustion, **5**: 168

Methylisobutylcarbinol

Boiling point, **3**: 222
 Verdet constant, dispersion of, **6**: 434

Methylisopropylbenzene (*o*-, *m*-, *p*-)

Refractive index, **7**: 51

Methylisopropylcarbinol, viscosity, 7: 217**1-Methyl-4-isopropylcyclohexa-1, 3-diene**

Heat of combustion, **5**: 163

N-Methylisoquinolinium iodide

-Ethyl alcohol*

1-Methyl-5-ketocyclohexylene

Dielectric constant, **6**: 92

Methylmalonic acid

Decomposition, kinetics of, **7**: 122
 Heat of combustion, **5**: 165

 α -Methylmannoside

Crystallography, **1**: 327
 Refractive index, **7**: 30

Methylmercaptan

Boiling point, **3**: 216
 Critical point, **3**: 237, 248
 Heat of combustion, **5**: 169
 Orthobaric density, **3**: 237
 Surface tension, **4**: 448
 Vapor pressure, **3**: 216
 Vapor pressure above 1 atm., **3**: 237

1-Methyl-3-methylene-1-cyclohexene

Heat of combustion, **5**: 163

 α -Methylnaphthalene

Absorption spectra, **5**: 347, 363
 Birefringence, electric, **7**: 111
 Refractive index, **7**: 53

 β -Methylnaphthalene

Absorption spectra, **5**: 347, 363
 Refractive index, **7**: 53

Methylnaphthalene α -picrate

-Methylnaphthalene β -picrate
 Freezing point-solubility, **4**: 165

Methylnaphthalene β -picrate

-Naphthalene picrate
 Freezing point-solubility, **4**: 164

Methylnitroamine

Absorption spectra, **5**: 335
 Electrical conductivity, aqueous solution, **6**: 261
 Refractive index, **7**: 34

Methylnitroanilines

Surface tension, **4**: 456

Methylnonylcarbinol

Verdet constant, dispersion of, **6**: 434
 Viscosity, **7**: 221

Methyloctanes, dielectric constant, 6: 94**Methyloctyl alcohol**

Verdet constant, dispersion of, **6**: 434

Methyloctylcarbinol, viscosity, 7: 221**Methylpentanes, viscosity, 7: 218****N-Methylphenylacridium iodide**

-Pyridine
 Boiling point elevation, **3**: 342

N-Methylphenylacridinium salts

-Chloroform*
 -Ethyl alcohol*

asym.-Methylphenylhydrazine

Dielectric constant, **6**: 92
 Refractive index, **7**: 41

Methylphenylpicramide (α -, β -)

-Pyridine
 Density, **7**: 83
 Refractive index, **7**: 83

 α , β -Methylphenylstyrene

Heat of combustion, **5**: 164

Methylphenylurethan, viscosity, 7: 220

MethylphosphineSolubility in non-aqueous liquids, **3**: 268Solubility in water, **3**: 261**Methylpicric acid***-Hydrogen chloride***-o-Nitrobenzoic acid*Freezing point-solubility in water, **4**: 418*-Picric acid*Freezing point-solubility in water, **4**: 416*-Salicylic acid*Freezing point-solubility in water, **4**: 418**1-Methylpiperidine**Refractive index, **7**: 40Solubility in water, **3**: 390*-Ethyl ether***-Xylene*Distribution coefficients in water, **3**: 429**2-Methylpiperidine**Optical rotatory power, **7**: 406Refractive index, **7**: 40Solubility in water, **3**: 390**3-Methylpiperidine**Refractive index, **7**: 40Solubility in water, **3**: 390**4-Methylpiperidine**Refractive index, **7**: 40Solubility in water, **3**: 390**Methylpropylacetic acid**, viscosity, **7**: 218**Methylpropylacetone**, viscosity, **7**: 219*p*-Methylpropylazophenol*-p-Azoanisole***-p-Dipropylazophenol***-p-Ethylpropylazophenol****Methylpropylbenzene** (*o*-, *m*-, *p*-)Refractive index, **7**: 51**Methyl-1-propylcyclopentane**Heat of combustion, **5**: 163**Methyl-1-propyl-3-cyclohexane**Heat of combustion, **5**: 164*o*-MethylpsychotrineOptical rotatory power, **7**: 477**Methylquinine sulfate**Absorption spectra, **5**: 372*α*-MethylquinolineBirefringence, **7**: 111Refractive index, **7**: 49*N*-Methylquinolinium iodide*-Ethyl alcohol***α*-MethylrhamnosideCrystallography, **1**: 327Refractive index, **7**: 30**Methylsaligenin**Verdet constant, **6**: 429**Methylsilicane**Boiling point, **3**: 216Density, gas, **3**: 3Vapor pressure, **3**: 216*m*-MethylstilbeneRefractive index, **7**: 61*-Quinoline*Density, **7**: 88Refractive index, **7**: 88Dispersion, **7**: 107*α*-MethylstyreneAbsorption spectra, **5**: 344Heat of combustion, **5**: 163Magnetic susceptibility, **6**: 363Refractive index, **7**: 46*β*-MethylstyreneAbsorption spectra, **5**: 344Heat of combustion, **5**: 163Refractive index, **7**: 46**Methylsuccinic acid**Density, aqueous solution, **3**: 114Heat of combustion, **5**: 165Viscosity, aqueous solution, **5**: 21**Methylsuccinic anhydride**Heat of combustion, **5**: 166**1-Methyl-2-sulfoneamide-4-isopropylbenzene***-1-Methyl-3-sulfoneamide-4-isopropylbenzene*Freezing-point-solubility, **4**: 180**Methyltetrose**Optical rotatory power, **7**: 386**Methyltetryl**, heat of combustion, **5**: 168**Methyltoluidine** (*o*-, *p*-)Viscosity, **7**: 219**Methyltribenzylammonium chloride**, electrical conductivity, aqueous solution, **6**: 232**Methyltriethyllead**Boiling point, **1**: 116, 163Density, **1**: 116Refractive index, **1**: 116, 165**Methyluracils**Heat of combustion, **5**: 167**Methylurea**Density, aqueous solution, **3**: 113*-Phenol*Freezing point-solubility, **4**: 110**Methylurethan**Cryoscopic constant, **4**: 183Surface tension, **4**: 451Viscosity, **5**: 41*-Menthol****Metric system**, **1**: 1**Mexico**, weights and measures, **1**: 9**Meyer's formula** (flow of gas), **5**: 1**Meyerhofferite**Density, **1**: 145Refractive index, **1**: 145, 170**Miargyrite**Density, **1**: 124Photoconductivity, **6**: 66**Mica**Density, **2**: 311Dielectric constant, **2**: 310Dielectric strength, **2**: 310Electrical conductivity, **2**: 310Emission, spectral, **5**: 258Grating spaces of, **6**: 7Phlogopite, compressibility, **3**: 50Power factor, **2**: 310Spectral filter, use as, **5**: 273Thermal conductivity, **2**: 311, 315; **5**: 217, 231Transmission of radiant energy, **5**: 270X-rays, absorption coefficient, **6**: 16*See also* Muscovite.**Mica tape**Density, **2**: 315Thermal conductivity, **2**: 315**Micanite**Thermal conductivity, **2**: 314; **5**: 217*See also* Mica.**Micarta folium**Thermal conductivity, **2**: 314**Microcline**Compressibility, **3**: 50Density, **1**: 158Heat of formation, **5**: 206Melting point, **1**: 158Refractive index, **1**: 158, 170; **7**: 28Specific heat, **2**: 101; **5**: 101**Micromeritol**Optical rotatory power, **7**: 464**Micromerol**Optical rotatory power, **7**: 465**Microphone**, **6**: 457**Miersite**Density, **1**: 124Refractive index, **1**: 124, 165X-ray diffraction data, **1**: 342**Milarite**Density, **1**: 158Refractive index, **1**: 158, 166**Mildew fungi**, **2**: 322**Millerite**Density, **1**: 131Melting point, **1**: 131*See also* Nickel sulfide.**Mimetite**Density, **1**: 116Melting point, **1**: 116Refractive index, **1**: 116, 167; **7**: 20Transition point, **1**: 116; **4**: 7**Minargent** (alloy), **2**: 379**Minasragrite**Refractive index, **1**: 135, 170**Mineral waxes**, **2**: 168Nomenclature, **2**: 168Refractive index, **2**: 153**Mineral wool**. *See* Slag wool.**Minerallac**Density, **2**: 311Dielectric constant, **2**: 310Dielectric strength, **2**: 310Thermal expansion, **2**: 311**Minerals**Ages of (radioactive method), **1**: 381Compressibility, **3**: 49Dehydration behavior, **7**: 312Dielectric constant, **6**: 99Electrical conductivity, **6**: 154Ferromagnetic, **6**: 410Hall effect, **6**: 416Helium content, **1**: 382Kerr effect, **6**: 435Lead content, **1**: 383Magnetic susceptibility, **6**: 364Name index, **1**: 174Photoconductivity, **6**: 66Piezoelectric constants, **6**: 209Pyroelectric constants, **6**: 209Radioactive, **1**: 377Reflectivity, **5**: 256Refractivity, **7**: 16Specific heat, **5**: 95Spectral absorption, **5**: 270Thermal conductivity, **5**: 217, 230Thorium, radioactivity, **1**: 377Thorium content, **1**: 382Uranium, radioactivity, **1**: 377Uranium content, **1**: 382Velocity of crystallization, **5**: 60Velocity of solution, **5**: 57Verdet constant, **6**: 426*See also* Building stones.**Minium**, density, **1**: 115**Minofor** (alloy), **2**: 379**Minute**, definition, **1**: 39**Mira metal**, **2**: 379**Mirabilite**Density, **1**: 150Refractive index, **1**: 150, 168**Mirrors**, metallic, reflectivity of, **5**: 248**Misch metal**, **2**: 379**Misco metal**, **2**: 379; *cf.* 604**Misenite**. *See* Potassium bisulfate.**Mitis iron**, **2**: 379; *cf.* 529**Mixite**Density, **1**: 123Refractive index, **1**: 123, 167**Mock gold**, **2**: 379**Mock silver**, **2**: 379**Mohair**, **2**: 235**Mohs**, definition, **1**: 39**Mole**, definition, **1**: 39**Molecular constants**, **5**: 409**Molecular flow**, laws of, **1**: 91**Molecular weight**, osmotic pressure, calculation from, **4**: 431**Molecules**Critical potentials, **6**: 72Diatomic, molecular constants, **5**: 409Dissociation, work of, **6**: 72Effective sectional area, **6**: 117

Molecules.—(Continued)

Excitation

Critical potentials, 6: 69

Work, 6: 72

Multiple level, 5: 417

Translational energy, value of, 1: 18

Molera. See Diatomaceous earth.**Molybdenite**

Absorption, index of, 5: 250

Density, 1: 133

Emission, spectral, 5: 254

Photoconductivity, 6: 66

Refraction, index of, 5: 250

Melting point, 1: 133

See also Molybdenum disulfide.

Molybdenum

Boiling point, 1: 102; 3: 205

Brightness, 5: 246

Brightness temperature, 5: 245

Cathodoluminescence, 5: 390

Color temperature, 5: 246

Commercial, thermal expansion, 2: 473

Compressibility, 3: 47, 48

Critical potentials, 6: 71

Density, 1: 104; 2: 456

Electrical conductivity, 1: 104; 6: 136, 137

Low temperature, 6: 127, 133

Single crystal, 6: 135

Electron emission excited by positive ions, 6: 65

Electronic structure, normal and excited, 6: 71

Electrons, thermal emission of, 6: 53, 55

Electrons freed by X-rays, energy of, 6: 4

Emission, spectral, 5: 242, 243, 253

Emission spectra, 5: 304

Evaporation from hot filament, 5: 53

Hall effect, 6: 416

Hardness, 2: 592

Heat of vaporization, 1: 102

Magnetic susceptibility, 6: 355

Melting point, 1: 104

Nernst effect, 6: 420

Persistent lines, 5: 323

Quantum numbers, 5: 408

Radiation temperature, total, 5: 246

Righi-Leduc effect, 6: 421

Specific heat, 1: 104; 5: 93

Spectral series, 5: 401

Tensile properties, 2: 592

Thermal conductivity, 5: 220, 221

Thermal expansion, 1: 104; 2: 461

Thermionic work function, 6: 53, 56

Thermochemistry, 5: 193

Thermoelectric properties, 6: 214, 225

Vapor pressure, 3: 205

X-radiation from target of, 6: 46, 47

X-ray absorption limits, 6: 38

X-ray crystal structure, 1: 340

X-ray emission spectra, 6: 37

X-ray lines, relative intensities, 6: 32

X-ray lines, width of, 6: 26

X-ray series, limiting frequencies, 6: 35

X-ray wave-lengths, standard, 6: 34

X-rays, absorption coefficient, 6: 13, 15

X-rays, absorption, discontinuity in, 6: 12

X-rays, emission efficiency, 6: 11

Zeeman effect, 5: 420, 423

-Carbon*

-Carbon*-Chromium-Iron

-Carbon*-Chromium-Iron-Manganese-Nickel

-Carbon*-Chromium-Iron-Manganese-Silicon

-Carbon*-Chromium-Iron-Nickel

Molybdenum.—(Continued)

-Carbon*-Chromium-Iron-Tungsten-Vanadium

-Carbon*-Chromium-Iron-Vanadium

-Carbon*-Iron

-Carbon*-Iron-Manganese

-Carbon*-Iron-Manganese-Nickel

-Carbon*-Iron-Nickel

-Carbon*-Iron-Silicon

-Carbon*-Iron-Vanadium

-Chromium*-Copper

-Chromium*-Iron

-Chromium*-Iron-Tungsten

-Cobalt*

-Copper*-Nickel

-Iron*

-Iron*-Manganese

-Iron*-Manganese-Nickel-Silicon

-Iron*-Nickel

-Iron*-Nickel-Silicon

-Iron*-Vanadium

-Manganese*

-Nickel

Equilibrium diagram, 2: 438

Thermoelectric properties, 6: 221

-Silicon

Density, 2: 594

-Tungsten

Electrical conductivity, 6: 192

Equilibrium diagram, 2: 438

X-ray diffraction data, 1: 349

Molybdenum chloride

-Ethyl alcohol*

Molybdenum dioxide

Heat of formation, 5: 193

Magnetic susceptibility, 6: 359

Molybdenum disulfide

Electrical conductivity, 6: 154

Magnetic field, effect of, 6: 422

Emission, spectral, 5: 257, 258

Ettingshausen effect, 6: 420

Hall effect, 6: 416

Peltier coefficient, 6: 227

Photoconductivity, 6: 66

Refractive index, 7: 22

Thomson effect, 6: 228

X-ray diffraction data, 1: 343

See also Molybdenite.

Molybdenum nickel steels

Endurance limits, 2: 604, 605

Molybdenum pentachloride

Electrical conductivity, 6: 148

Molybdenum sesquioxide

Magnetic susceptibility, 6: 359

Molybdenum silicon steels

Mechanical properties, 2: 525

Molybdenum steels

Electrical conductivity, 6: 200

Endurance limits, 2: 605

Magnetic properties, 6: 388

Thermal expansion, 2: 472

Thermoelectric properties, 6: 223

Molybdenum sulfide

Photoelectric current, 6: 69

Thermoelectric power, 6: 224

Molybdenum tetroxide

Heat of formation, 5: 193

Molybdenum trioxide

Density, aqueous solution, 3: 70; 7: 71

Heat of formation, 5: 193

Magnetic susceptibility, 6: 359

Refractive index, aqueous solution, 7: 71

-Acetic acid*

-Arsenic acid*

-Arsenic pentoxide*

-Chromic acid*

-Chromium trioxide*

-Citric acid*

-Glycolic acid*

Molybdenum trioxide.—(Continued)

-Iodic acid*

-Lactic acid*

-Malic acid*

-Mandelic acid*

-Oxalic acid

Density, aqueous solution, 3: 102

Refractive index, aqueous solution, 7: 92

-Phenylacetic acid

Density, aqueous solution, 3: 102

Refractive index, aqueous solution, 7: 95

-Phenylglycolic acid

Refractive index, aqueous solution, 7: 95

-Phosphoric acid

Density, aqueous solution, 3: 97

Refractive index, aqueous solution, 7: 92

-Potassium molybdate

Freezing point-solubility, 4: 61

-Propionic acid

Density, aqueous solution, 3: 102

Refractive index, aqueous solution, 7: 94

-Quinic acid

Density, aqueous solution, 3: 102

Refractive index, aqueous solution, 7: 95

-Sodium molybdate

Freezing point-solubility, 4: 61

-Succinic acid

Density, aqueous solution, 3: 102

Refractive index, aqueous solution, 7: 94

-Sulfuric acid

Boiling point elevation, 3: 328

-Tartaric acid

Density, aqueous solution, 3: 102

Refractive index, aqueous solution, 7: 94

Molybdenum trisulfide

Magnetic susceptibility, 6: 359

Molybdenum tritetroxide

Magnetic susceptibility, 6: 359

Molybdc acid

Heat of formation, 5: 193

Magnetic susceptibility, 6: 359

Molybdc oxide

Specific heat, 5: 98

Molybdite

Density, 1: 133

Refractive index, 1: 133, 172

Molybdophyllite

Density, 1: 142

Refractive index, 1: 142, 167; 7: 23

Molysite

Boiling point, 1: 128, 163

Density, 1: 128

Melting point, 1: 128

See also Ferric chloride.

Moment, definition, 1: 39**Moment of inertia, molecules, 5: 409****Monazite, refractive index, 7: 23****Mond 70 (alloy), 2: 379; cf. 480, 604****Monel metal, 2: 379, 408, 469, 604, 606**

Annealing and forging range, 2: 482

Electrical conductivity, 6: 170

Emission, spectral, 5: 254

Endurance limits, reversed bending stresses, 2: 604

Hall effect, 6: 417

Hardness, 2: 480

Heat of fusion, 2: 459

Mechanical properties, 2: 480

Nernst effect, 6: 421

Oxidized, emission, spectral, 5: 244

Thermal conductivity, 5: 224

Thermal expansion, 2: 467, 469

- Monetite**
Density, **1**: 143
Refractive index, **1**: 143, 169
- Monimolite**, density, **1**: 116
- Monoacetin**
Diffusion in ethyl alcohol, **5**: 74
Saponification constants, **7**: 135
-Ethyl alcohol*
- Monoacetylphenylenediamine** (*o*-, *m*-, *p*-)
-Benzene*
- Monoethylpyrocatechol**
-Glycerol*
- Montan wax**, **2**: 169, 205
- Montanite**
Density, **1**: 111
Refractive index, **1**: 111, 173
- Montanium** (alloy), **2**: 379; cf. 534, 601
- Month**
Definition, **1**: 39, 391
Lunar, definition, **1**: 38
Nodical, **1**: 39
Sidereal, **1**: 41
Tropical, **1**: 42
- Monticellite**
Density, **1**: 146
Decomposition temperature, **1**: 146
Refractive index, **1**: 146, 172
- Montroydite**
Density, **1**: 120
Refractive index, **1**: 120, 173
See also Mercuric oxide.
- Moon**
Brightness, **5**: 247
Characteristics, **1**: 392
- Moore nitrogen tube**
Luminous efficiency, **5**: 438
- Morenosite**
Density, **1**: 131
Refractive index, **1**: 131, 169; **7**: 22
- Morin's Chinese bronze**, **2**: 379, 561
- Morocco**, weights and measures, **1**: 9
- Morphine**
Absorption spectra, **5**: 352
Crystallography, **1**: 334
Electrical conductivity, aqueous solution, **6**: 301
Heat of combustion, **5**: 168
Optical rotatory power, **7**: 467
-Ammonia*
- Mortars**
Compressive strength, **2**: 66
Density, **2**: 314
Lime, **2**: 123
Strength tests, **2**: 120
Thermal conductivity, **2**: 314
- Mosaic gold**, **2**: 379; cf. 555, 601
- Moseley's diagram**, **6**: 31
- Moseley's law**, **6**: 27
- Mousset's silver**, **2**: 379
- MS steel**, **2**: 379; cf. 472, 605
- Mucic acid**
Electrical conductivity, aqueous solution, **6**: 276
Heat of combustion, **5**: 165
- Mudge's speculum**, **2**: 379; cf. 559, 561
- Mullanite**, density, **1**: 116
- Mullite**
Crystallography, **2**: 68
Density, **1**: 137
Decomposition temperature, **1**: 137; **4**: 84
Expansion on heating, **2**: 84
Fusion temperature, **2**: 83
Heat of formation, **5**: 194
- Mumetal**, **2**: 379
- Munson and Walker's tables**, **2**: 353
- Muntz metal**, **2**: 379, 555, 600, 602
Thermal expansion, **2**: 470
- Murman's alloy**, **2**: 379
- Muscovite**
Density, **1**: 158
Refractive index, **1**: 158, 171; **7**: 28
Residual rays, **5**: 261
- Musket steel**, **2**: 380
- Mustard gas**. See Di-(2-chloroethyl) sulfide.
- Mustard oil**. See Allyl isothiocyanate.
- Mutarotation**, **2**: 335
Kinetics of, **7**: 128
- Myoctonine**, optical rotatory power, **7**: 478
- Myricyl alcohol**
Absorption spectra, **5**: 334
Surface tension, **4**: 463
- Myristic acid**
Esterification constant, **7**: 138
Heat of combustion, **5**: 166
Heat of fusion, **5**: 134
Melting point under pressure, **4**: 10
Specific heat
Liquid, **5**: 113
Solid, **5**: 104
"Surface vapor pressure," **4**: 476
Vapor pressure, **3**: 227
Viscosity, **7**: 221
-Benzene*
-Lauric acid*
-Methyl alcohol*
-Palmitic acid
Freezing point-solubility, **4**: 164
-Stearic acid
Freezing point-solubility, **4**: 164
- Myrtenol**, optical rotatory power, **7**: 412
- Mystic metal**, **2**: 380
- Mysorine**, density, **1**: 123
- N.G.F. alloy**, **2**: 380; cf. 534
- N.P.L. alloy**, **2**: 381; cf. 534, 601
- Nadorite**
Density, **1**: 116
Refractive index, **1**: 116, 174
- Nagaoka and Honda effect**, **6**: 439
- Nantokite**
Density, **1**: 121
Melting point, **1**: 121
Refractive index, **1**: 121, 165
See also Cuprous chloride.
- Naphtha**
Emission, spectral, **5**: 257
See also Gasolene, Hydrocarbon oils, Petroleum.
- Naphthaldehyde** (α -, β -)
-Quinoline
Density, **7**: 87
Refractive index, **7**: 87
Dispersion, **7**: 106
- Naphthalene**
Absorption spectra, **5**: 333, 345, 363, 375, 378
Azeotropic mixtures, **3**: 322
Boiling point, **1**: 53; **3**: 226, 347
Compressibility, **3**: 50
Cryoscopic constant, **4**: 184, 215
Density, **3**: 30, 34
Dielectric constant, **6**: 95
Diffusion in benzene, **5**: 74
Diffusion in methyl alcohol, **5**: 73
Diffusion of vapor in air, **5**: 63
Electrical conductivity, **6**: 144
Flash point, **2**: 161
Heat of combustion, **5**: 163
Heat of fusion, **5**: 134
Heat of vaporization, **5**: 138
Ignition temperature, **2**: 174
Internal pressure, **4**: 19
Magnetic susceptibility, **6**: 363
Melting point under pressure, **4**: 10
Melting pressure, **4**: 16
Oxidation, kinetics of, **7**: 147
Photoluminescence, **5**: 387
- Naphthalene**.—(Continued)
Polarization of light scattered by, **5**: 267, 268
Refractive index, **7**: 49
Rubber, solubility in, **2**: 272
Rubber softener, **2**: 277
Specific heat
Liquid, **5**: 112
Solid, **5**: 104
Surface tension, **4**: 459
Thermal conductivity, **5**: 216
Thermal expansion, **3**: 45
Vapor pressure
Liquid, **3**: 226
Solid, **3**: 208
Verdet constant, **6**: 430
Viscosity, **5**: 45, 51; **7**: 220
Volume change on melting, **4**: 10
-Acetic acid*
-Acetone*
-Acetonitrile*
-Acetophenone*
-Amyl benzoate*
- β -Amylene*
-Aniline*
-Anisole*
-Anthracene*
-Antimony tribromide*
-Antimony trichloride*
-Arsenous bromide*
-Benzene*
-Benzene*-Trinitrotoluene
-Benzil*-Chloroform
-Benzoic acid*
-Bromocamphor*
-Butyl alcohol*
-Butyric acid*
-Camphene*
-Camphor*
-Carbon dioxide*
-Carbon dioxide*-Picric acid
-Carbon disulfide*
-Carbon disulfide*-Ethyl ether
-Carbon disulfide*-Methylal
-Carbon tetrachloride*
-Catechol*
-Cetyl palmitate*
-Chloral hydrate*
-Chloroacetic acid*
-Chlorobenzene*
-Chloroform*
-Chloroform*-Ethyl ether
-Chloronitrobenzene (*m*-, *p*-)*
-*m*-Cresol*
-Cyclohexane*
-Cyclohexanone*
-Dichloroethylene*
-Dichloromethane*
-Diethyl diacetyl tartrate*
-Diethyl ketone*
-Diethyl phthalate*
-Diethyl tartrate*
-Diethylaniline*
-Dihydronaphthalene*
-Dinitrobenzene (*o*-, *m*-, *p*-)*
-*m*-Dinitrobenzene*-Toluene
-2, 4-Dinitrophenol*
-2, 4-Dinitrotoluene*
-Diphenyl*
-Diphenylamine*
-Diphenylmethane*
-Ethane*
-Ethyl acetate*
-Ethyl acetoacetate*
-Ethyl alcohol*
-Ethyl bromide*
-Ethyl butyrate*
-Ethyl chloride*
-Ethyl chloroacetate*
-Ethyl ether*
-Ethyl iodide*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Naphthalene.—(Continued)

- Ethyl propionate*
- Ethylene bromide*
- Ethylene chloride*
- Fluorene*
- Formic acid*
- Hexachloroethane*
- Hexane*
- Hydroquinol*
- Indene*
- Iodine*
- Isoamyl acetate*
- Isobutyl bromide*
- Isobutyric acid*
- Lophine*
- Menthol*
- Methyl acetate*
- Methyl alcohol*
- Methyl benzoate*
- Methyl butyrate*
- Methyl formate*
- Methyl isothiocyanate*
- Methyl propionate*
- Methylal*
- Naphthol (α , β -)
 - Freezing point-solubility, 4: 155, 180
- Naphthylamine (α , β -)
 - Density, 3: 193
 - Freezing point-solubility, 4: 155
- m*-Nitroaniline
 - Freezing point-solubility, 4: 135
- Nitrobenzene
 - Density, 3: 177; 7: 84
 - Freezing point-solubility, 4: 176
 - Refractive index, 7: 84
 - Dispersion, 7: 104
 - Viscosity, 5: 45
- α -Nitronaphthalene
 - Freezing point-solubility, 4: 180
- Nitrophenol (*o*-, *p*-)
 - Freezing point-solubility, 4: 131, 177
- p*-Nitrotoluene
 - Freezing point-solubility, 4: 179
- Palmitic acid
 - Density, 3: 194
- Paraldehyde
 - Density, 3: 186
- Phenanthrene
 - Density, 3: 194; 7: 89
 - Freezing point-solubility, 4: 156
 - Refractive index, 7: 89
- Phenol
 - Freezing point-solubility, 4: 136
- Phosgene
 - Boiling point elevation, 3: 330
- Phosphorus
 - Solubility, mutual, 3: 394
- Phthalic anhydride
 - Freezing point-solubility, 4: 180
- Picramide
 - Freezing point-solubility, 4: 127
- Picric acid
 - Freezing point-solubility, 4: 120
- Picryl chloride
 - Freezing point-solubility, 4: 117
- Propionic acid
 - Freezing point-solubility, 4: 112
 - Freezing point-solubility in water, 4: 412
- Propionitrile
 - Boiling point elevation, 3: 338
- Propyl alcohol
 - Boiling point elevation, 3: 340
 - Density, 3: 164
 - Dielectric constant, 6: 102
 - Freezing point-solubility, 4: 112
 - Freezing point-solubility in water, 4: 412
 - Heat of solution, 5: 153
- Propyl butyrate
 - Density, 3: 190

Naphthalene.—(Continued)

- Pyridine
 - Density, 3: 172; 7: 83
 - Freezing point-solubility, 4: 174
 - Refractive index, 7: 83
 - Dispersion, 7: 104
- Quinoline
 - Density, 3: 193; 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- p*-Quinone
 - Freezing point-solubility, 4: 127
- Resorcinol
 - Freezing point-solubility, 4: 139
- Stearic acid
 - Freezing point-solubility, 4: 156
- Styphnic acid
 - Freezing point-solubility, 4: 122
- Sulfur
 - Boiling point elevation, 3: 347
 - Freezing point lowering, 4: 38
- Sulfur dioxide
 - Boiling point elevation, 3: 328
- Tetrachloroethane
 - Density, 3: 154
 - Freezing point-solubility, 4: 265
- Thymol
 - Freezing point-solubility, 4: 155
- Toluene
 - Boiling point elevation, 3: 346
 - Density, 3: 188
 - Dielectric constant, 6: 103
 - Freezing point-solubility, 4: 179
 - Heat of solution, 5: 154
 - Specific heat, 5: 128
 - Viscosity, 5: 49
- p*-Toluidine
 - Density, 3: 189
 - Freezing point-solubility, 4: 180
- Trimethylcarbinol
 - Freezing point-solubility, 4: 116
- 1, 3, 5-Trinitrobenzene
 - Density, 3: 173
 - Freezing point-solubility, 4: 118
- Trinitroresol
 - Freezing point-solubility, 4: 147
- 2, 4, 6-Trinitrotoluene
 - Freezing point-solubility, 4: 146
- Triphenylcarbinol
 - Freezing point-solubility, 4: 156
- Triphenylmethane
 - Boiling point elevation, 3: 347
 - Freezing point-solubility, 4: 156
- Tristearin
 - Freezing point-solubility, 4: 156
- Valeric acid
 - Freezing point-solubility, 4: 117
- m*-Xylene
 - Density, 3: 191
- Naphthalene picrate
 - Benzene*
 - Chloroform*
 - Methylnaphthalene β -picrate*
- Naphthalene tetrachloride
 - Crystallography, 1: 329
 - Chloroform*
- β -Naphthalenesulfonic acid
 - Density, aqueous solution, 3: 115
 - Electrical conductivity, aqueous solution, 6: 294
 - Hydrogen chloride*
- Naphthalic acid, heat of combustion, 5: 166
- Naphthalic anhydride
 - Heat of combustion, 5: 166
- Naphthazarine, photoconductivity, 6: 66
- α -Naphthoic acid
 - Absorption spectra, ultra-violet, 5: 363
 - Electrical conductivity, aqueous solution, 6: 297
 - Heat of combustion, 5: 166

 α -Naphthoic acid.—(Continued)

- Sulfur
 - Freezing point lowering, 4: 38
- β -Naphthoic acid
 - Absorption spectra, ultra-violet, 5: 363
 - Electrical conductivity, aqueous solution, 6: 297
 - Heat of combustion, 5: 166
- Naphthoic acid esters (α -, β -)
 - Optical rotatory power, 7: 362
- α -Naphthol
 - Absorption spectra, 5: 333, 345, 363
 - Boiling point, 3: 226
 - Diffusion in methyl alcohol, 5: 73
 - Heat of combustion, 5: 167
 - Heat of fusion, 5: 134
 - Magnetic susceptibility, 6: 363
 - Melting point under pressure, 4: 10
 - Photoconductivity, 6: 66
 - Photoluminescence, 5: 387
 - Specific heat
 - Liquid, 5: 112
 - Solid, 5: 104
 - Thermal conductivity, 5: 216
 - Transition temperature, 4: 8
 - Vapor pressure, 3: 226
- Acetamide*
- Acetophenone*
- Acridine*
- Aminophenol (*m*-, *p*-)*
- Aniline*
- Antipyrine*
- Arsenous bromide*
- Azobenzene*
- Benzamide*
- Benzhydrol*
- Benzophenone*
- Carbazole*
- Chloroacetic acid*
- Cineole*
- Cinnamic acid*
- Dimethyl oxalate*
- Dimethylpyrone*
- Diphenylamine*
- Diphenylmethane*
- Fenchone*
- Hydrogen chloride*
- m*-Hydroxybenzaldehyde*
- Isoamyl acetate*
- Methyl alcohol*
- Naphthalene*
- β -Naphthol
 - Freezing point-solubility, 4: 180
- Naphthylamine (α -, β -)
 - Freezing point-solubility, 4: 156
- Phenylenediamine (*o*-, *m*-, *p*-)
 - Freezing point-solubility, 4: 143
- Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- Succinic acid
 - Freezing point-solubility, 4: 114
- Succinimide
 - Freezing point-solubility, 4: 114
- p*-Toluidine
 - Freezing point-solubility, 4: 152
- Trichloroacetic acid
 - Freezing point-solubility, 4: 104
- Trimethylcarbinol
 - Freezing point-solubility, 4: 116
- Triphenylcarbinol
 - Freezing point-solubility, 4: 156
- Triphenylmethane
 - Freezing point-solubility, 4: 156
- β -Naphthol
 - Absorption spectra, 5: 333, 345, 363
 - Boiling point, 3: 226
 - Cryoscopic constant, 4: 184
 - Flash point, 2: 161
 - Heat of combustion, 5: 167

* Data for system will be found under this compound in Index. Full explanation on page vii.

β -Naphthol.—(Continued)

- Heat of fusion, 5: 134
- Photoconductivity, 6: 66
- Photoluminescence, 5: 387
- Solubility in water, 4: 253
- Specific heat
 - Liquid, 5: 112
 - Solid, 5: 104
- Thermal conductivity, 5: 216
- Vapor pressure, 3: 226
- Acetamide*
- Acetone*
- Acetophenone*
- Acridine*
- Aminophenol (*m*-, *p*-)*
- Aniline*
- Anthracene*
- Antipyrine*
- Azobenzene*
- Benzamide*
- Benzene*
- Benzhydrol*
- Benzophenone*
- Carbazole*
- Chloroacetic acid*
- Cineole*
- Cinnamic acid*
- Dimethyl oxalate*
- Dimethylpyrone*
- Diphenylamine*
- Diphenylmethane*
- Ethylene bromide*
- Fenchone*
- Formic acid*
- m*-Hydroxybenzaldehyde*
- Isoamyl acetate*
- Methyl alcohol*
- Naphthalene*
- α -Naphthol*
- Naphthylamine (α -, β -)
 - Freezing point-solubility, 4: 156
- Phenyl salicylate
 - Freezing point-solubility, 4: 157
- Phenyl salicylate-Sulfonal
 - Freezing point-solubility, 4: 170
- Phenylenediamine (*o*-, *m*-, *p*-)
 - Freezing point-solubility, 4: 143, 144
- Picric acid
 - Freezing point-solubility, 4: 120
- Pyridine
 - Boiling point elevation, 3: 342
- Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- p*-Quinone
 - Freezing point-solubility, 4: 127
- Resorcinol
 - Freezing point-solubility, 4: 139
- Succinic acid
 - Freezing point-solubility, 4: 114
- Succinimide
 - Freezing point-solubility, 4: 114
- Sulfonal
 - Freezing point-solubility, 4: 152
- Sulfur
 - Freezing point lowering, 4: 38
- p*-Toluidine
 - Freezing point-solubility, 4: 152
- Trichloroacetic acid
 - Freezing point-solubility, 4: 104
- Trimethylcarbinol
 - Freezing point-solubility, 4: 116
- Triphenylcarbinol
 - Freezing point-solubility, 4: 157
- Triphenylmethane
 - Freezing point-solubility, 4: 157
- β -Naphthol picrate
 - Benzene*
 - Sulfur dioxide
 - Boiling point elevation, 3: 328

 α -Naphtholazine

- Benzalazine*
- α -Naphthonitrile
 - Absorption spectra, 5: 363
 - Dielectric constant, 6: 95
 - Heat of combustion, 5: 168
 - Verdet constant, 6: 430
- β -Naphthonitrile
 - Absorption spectra, 5: 363
 - Dielectric constant, 6: 95
 - Heat of combustion, 5: 168
 - Verdet constant, 6: 430
- Naphthyl acetate (α -, β -)
 - Trichloroacetic acid
 - Freezing point-solubility, 4: 104
- β -Naphthyl benzoate
 - Carbon tetrachloride*
- α -Naphthyl cyanide
 - Birefringence, magnetic, 7: 111
- β -Naphthyl ethyl ether
 - Verdet constant, 6: 430
 - Cinnamylideneacetophenone*
 - Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- β -Naphthyl salicylate
 - Birefringence, magnetic, 7: 112
 - Crystal nuclei, formation of, 5: 60
 - Crystallization velocity, 5: 61
 - Melting point under pressure, 4: 10
 - Thermal conductivity, 5: 216
 - Cineole*
- α -Naphthylamine
 - Absorption spectra, 5: 333, 345, 364
 - Crystallization velocity, 5: 61
 - Cryoscopic constant, 4: 184
 - Flash point, 2: 162
 - Heat of combustion, 5: 168
 - Heat of fusion, 5: 134
 - Melting point under pressure, 4: 10
 - Photoconductivity, 6: 66
 - Photoelectric threshold, 6: 68
 - Photoluminescence, 5: 387
 - Specific heat
 - Liquid, 5: 112
 - Solid, 5: 104
 - Thermal conductivity, 5: 228
 - Transition temperature, 4: 8
 - Verdet constant, 6: 430
 - Viscosity, 7: 220
 - Acetone*
 - Acetophenone*
 - m*-Aminophenol*
 - Aniline*
 - Anthracene*
 - Benzene
 - Benzhydrol*
 - Benzoic acid*
 - Benzophenone*
 - Catechol*
 - Chlorobenzene*
 - Chloroform*
 - 1, 4-Dihydroxynaphthalene*
 - 1, 5-Dihydroxynaphthalene*
 - 1, 6-Dihydroxynaphthalene*
 - 1, 8-Dihydroxynaphthalene*
 - 2, 3-Dihydroxynaphthalene*
 - 2, 6-Dihydroxynaphthalene*
 - 2, 7-Dihydroxynaphthalene*
 - Dinitrobenzene (*o*-, *m*-, *p*-)*
 - 2, 4-Dinitrochlorobenzene*
 - 2, 4-Dinitrophenol*
 - 2, 4-Dinitrotoluene*
 - 2, 6-Dinitrotoluene*
 - 3, 4-Dinitrotoluene*
 - 3, 5-Dinitrotoluene*
 - Diphenylamine*
 - Diphenylmethane*
 - Ethyl alcohol*
 - Guaiacol*

 α -Naphthylamine.—(Continued)

- Hydroquinol*
- Isoamyl acetate*
- Naphthalene*
- Naphthol (α -, β -)*
- Nitrobenzene
 - Density, 7: 84
 - Refractive index, 7: 84
 - Dispersion, 7: 104
- α -Nitronaphthalene
 - Freezing point-solubility, 4: 180
- o*-Nitrophenol
 - Freezing point-solubility, 4: 177
- m*-Nitrophenol
 - Freezing point-solubility, 4: 130
- p*-Nitrophenol
 - Freezing point-solubility, 4: 131
- Nitrosodimethylaniline
 - Freezing point-solubility, 4: 154
- Phenol
 - Density, 3: 184
 - Freezing point-solubility, 4: 136
 - Viscosity, 5: 48
- Pyrogallol
 - Freezing point-solubility, 4: 141
- Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- p*-Quinone
 - Freezing point-solubility, 4: 127
- Resorcinol
 - Freezing point-solubility, 4: 139
- Tetralin
 - Density, 7: 89
 - Refractive index, 7: 89
 - Dispersion, 7: 108
- o*-Toluidine
 - Density, 7: 86
 - Refractive index, 7: 86
 - Dispersion, 7: 105
- p*-Toluidine
 - Freezing point-solubility, 4: 152
- Trimethylcarbinol
 - Freezing point-solubility, 4: 116
- 1, 3, 5-Trinitrobenzene
 - Freezing point-solubility, 4: 119
- Triphenylcarbinol
 - Freezing point-solubility, 4: 158
- Triphenylmethane
 - Freezing point-solubility, 4: 158
- β -Naphthylamine
 - Absorption spectra, 5: 333, 345, 364
 - Heat of combustion, 5: 168
 - Photoluminescence, 5: 387
 - Refractive index, 7: 49
 - Thermal conductivity, 5: 216
 - Verdet constant, 6: 430
 - Viscosity, 7: 220
 - Acetic acid*
 - Acetone*
 - m*-Aminophenol*
 - Aniline*
 - β -Anthracene*
 - Benzene*
 - Benzhydrol*
 - Benzoic acid*
 - Benzophenone*
 - Butyl alcohol*
 - Camphor*
 - Catechol*
 - Chlorobenzene*
 - 1, 4-Dihydroxynaphthalene*
 - 1, 5-Dihydroxynaphthalene*
 - 1, 6-Dihydroxynaphthalene*
 - 1, 8-Dihydroxynaphthalene*
 - 2, 3-Dihydroxynaphthalene*
 - 2, 6-Dihydroxynaphthalene*
 - 2, 7-Dihydroxynaphthalene*
 - Dinitrobenzene (*o*-, *m*-, *p*-)*
 - 2, 4-Dinitrophenol*

* Data for system will be found under this compound in Index. Full explanation on page vii.

***β*-Naphthylamine.**—(Continued)

- 2, 4-Dinitrotoluene*
- 2, 6-Dinitrotoluene*
- 3, 4-Dinitrotoluene*
- 3, 5-Dinitrotoluene*
- Diphenylmethane*
- Hydroquinol*
- Isoamyl acetate*
- Methyl alcohol*
- Naphthalene*
- Naphthol (α -, β -)*
- o-Nitrophenol
 - Freezing point-solubility, 4: 177
- m-Nitrophenol
 - Freezing point-solubility, 4: 130
- p-Nitrophenol
 - Freezing point-solubility, 4: 131
- Nitrosodimethylaniline
 - Freezing point-solubility, 4: 154
- Phenol
 - Freezing point-solubility, 4: 136
- Pyrogallol
 - Freezing point-solubility, 4: 141
- Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- Resorcinol
 - Freezing point-solubility, 4: 139
- p-Toluidine
 - Freezing point-solubility, 4: 152
- Trimethylcarbinol
 - Freezing point-solubility, 4: 116
- 1, 3, 5-Trinitrobenzene
 - Freezing point-solubility, 4: 119
- Triphenylcarbinol
 - Freezing point-solubility, 4: 158
- Triphenylmethane
 - Freezing point-solubility, 4: 158
- Naphthylaminedisulfonic acids, electrical conductivity, aqueous solution, 6: 294
- Naphthylamine-naphthalenedisulfonate
 - Hydrogen chloride*
- Naphthylamine-naphthalenesulfonate
 - Hydrogen chloride*
- α -Naphthylamine naphthalene- $\alpha(\beta)$ -sulfonate
 - Crystallography, 1: 336
 - Transition temperature, 4: 8
- Naphthylaminesulfonic acids, electrical conductivity, aqueous solution, 6: 294
- 1, 4-Naphthylenediamine
 - Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
- 1, 5-Naphthylenediamine
 - Quinoline,
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- 1, 6-Naphthylenediamine
 - Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- 1, 8-Naphthylenediamine
 - Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- 2, 3-Naphthylenediamine
 - Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106
- 2, 7-Naphthylenediamine
 - Quinoline
 - Density, 7: 87
 - Refractive index, 7: 87
 - Dispersion, 7: 106

***α*-Naphthylhexylcarbinyl esters**

- Optical rotatory power, 7: 362
- Narceine, heat of combustion, 5: 168
- Narcissine, optical rotatory power, 7: 475
- Narcotine
 - Absorption spectra, 5: 334, 355
 - Crystallography, 1: 336
 - Electrical conductivity, aqueous solution, 6: 302
 - Heat of combustion, 5: 168
 - Optical rotatory power, 7: 409, 476
- Narsarsukite, refractive index, 7: 26
- Nasonite
 - Density, 1: 144
 - Refractive index, 1: 144, 167
- Nataloin, optical rotatory power, 7: 386
- Natroalunite
 - Density, 1: 153
 - Refractive index, 1: 153, 166
- Natrochalcite
 - Density, 1: 152
 - Refractive index, 1: 152, 172
- Natrojarosite
 - Density, 1: 152
 - Refractive index, 1: 152, 173
- Natrolite
 - Dehydration behavior, 7: 313
 - Density, 1: 153
 - Refractive index, 1: 153, 168; 7: 27
 - Sodium ions, diffusion of, in, 5: 77
- Natron
 - Density, 1: 151
 - Refractive index, 1: 151, 168
- Natrophilite
 - Density, 1: 152
 - Refractive index, 1: 152, 172
- Naumannite
 - Density, 1: 124
 - Melting point, 1: 124
 - See also Silver selenide.
- Nebulae
 - Classification, 1: 388
 - Distribution, 1: 388
 - Motions, 1: 389
- Needle metal, 2: 380; cf. 565
- Neodymium
 - Cathodoluminescence, 5: 388, 390
 - Density, 1: 104; 2: 456
 - Electrical conductivity, 1: 104; 6: 153
 - Emission spectra, 5: 305
 - Isotopes, 1: 47
 - Magnetic susceptibility, 6: 355
 - Melting point, 1: 104
 - Persistent lines, 5: 323
 - Specific heat, 1: 104
 - Thermochemistry, 5: 194
 - X-ray absorption limits, 6: 39
 - X-ray emission spectra, 6: 39
 - X-ray series, limiting frequencies, 6: 35
- Neodymium acetate
 - Absorption spectra, solutions, 5: 327
- Neodymium bromate, solubility in water, 4: 228
- Neodymium bromide, absorption spectra, solutions, 5: 327
- Neodymium chloride
 - Absorption spectra, solutions, 5: 327, 328
 - Ammines, heat of formation, 5: 194
 - Electrical conductivity, 6: 149
 - Aqueous solution, 6: 233
 - Freezing point lowering of aqueous solution, 4: 257
 - Heat of formation, 5: 194
 - Solubility in water, 4: 227
 - Ethyl alcohol*
- Neodymium ethyl sulfate
 - Density, 1: 139
 - Refractive index, 1: 139, 166

Neodymium hydroxybenzoate (*m*-, *p*-)

- Electrical conductivity, aqueous solution, 6: 245
- Neodymium iodide, heat of formation, 5: 194
- Neodymium molybdate
 - Density, 1: 139
 - Melting point, 1: 139
 - Refractive index, 1: 139, 168; 7: 23
 - Lead molybdate*
- Neodymium nitrate
 - Absorption spectra, solutions, 5: 327, 328
 - Cobaltous nitrate*
 - Magnesium nitrate*
 - Manganous nitrate*
 - Nickel nitrate
 - Freezing point-solubility in water, 4: 363
 - Zinc nitrate
 - Freezing point-solubility in water, 4: 362
- Neodymium oxalate
 - Electrical conductivity, aqueous solution, 6: 258
 - Magnetic susceptibility, 6: 359
 - Solubility in aqueous solutions, 7: 339
- Neodymium oxide
 - Heat of formation, 5: 194
 - Magnetic susceptibility, 6: 359
- Neodymium salicylate, electrical conductivity, aqueous solution, 6: 245
- Neodymium sulfate
 - Absorption spectra, solutions, 5: 327, 328
 - Decomposition pressure, 7: 290
 - Density, 1: 139
 - Electrical conductivity, aqueous solution, 6: 236
 - Freezing point lowering of aqueous solution, 4: 257
 - Heat of formation, 5: 194
 - Magnetic susceptibility, 6: 359
 - Refractive index, 1: 139, 170; 7: 23
 - Solubility in water, 4: 227
- Neodymium sulfide, heat of formation, 5: 194
- Neogen (alloy), 2: 380
- Neon
 - Accommodation coefficient, 5: 53
 - Boiling point, 1: 102
 - Compressibility, gas, 3: 8
 - Critical constants, 1: 102; 3: 204, 248
 - Critical potentials, 6: 71
 - Density
 - Gas, 1: 102; 3: 3
 - Liquid, 1: 102; 3: 20
 - Solid, 1: 104
 - Dispersion formula, 7: 11
 - Electrons, absorption of, by, 6: 61
 - Electrons, attachment of, to form ions, 6: 116
 - Electrons, secondary emission of, 6: 63
 - Emission spectra, 5: 306
 - Heat of fusion, 1: 104
 - Heat of vaporization, 1: 102
 - Ionization by electrons, 6: 120
 - Ionization by α -particles, 6: 122
 - Isotopes, 1: 47
 - Magnetic susceptibility, 6: 354, 355
 - Melting point, 1: 104
 - Persistent lines, 5: 323
 - Polarization of light scattered by, 5: 265
 - Quantum numbers, 5: 408
 - Refractivity, 7: 7
 - Solubility in water, 3: 257
 - Specific heat, gas, 5: 80
 - Spectral series, 5: 401
 - Surface tension, 4: 441
 - Thermal conductivity, 5: 213, 214
 - Thermal expansion, gas, 3: 8

Neon.—(Continued)

- Vapor pressure, **3**: 203
- Viscosity, gas, **1**: 102; **5**: 2
- Zeeman effect, **5**: 420, 425
- Nephelite**
 - Density, **1**: 153
 - Refractive index, **1**: 153, 166; **7**: 27
 - Thermal conductivity, **5**: 232
 - Transition temperature, **1**: 153; **4**: 7, 85
 - Anorthite*
 - Diopside*
- Neptune**, characteristics, **1**: 392
- Nergandin** (alloy), **2**: 380; cf. 469
- Nernst effect**, **6**: 415
 - Coefficient, conversion factors, **1**: 30
- Nernst lamp**
 - Brightness, **5**: 246
 - Brightness temperature, **5**: 245
 - Color temperature, **5**: 246
 - Luminous efficiency, **5**: 437, 438
- Nernst oxides**, electrical conductivity, **6**: 155
- Nesquehonite**
 - Density, **1**: 141
 - Refractive index, **1**: 141, 169
- Netherlands**, weights and measures, **1**: 9
- Neurine hydrobromide**
 - Absorption spectra, **5**: 366
- Neusilber** (alloy), **2**: 380
- Nevada silver** (alloy), **2**: 380
- Nevastain** (alloy), **2**: 380
- Nevyanskite** (alloy), **2**: 381
- New metal**, electrical conductivity, **6**: 196
- Newberyite**
 - Density, **1**: 141
 - Refractive index, **1**: 141, 169
- Newloy**, **2**: 380
- Newton's alloy**, **2**: 380
- Newtonite**
 - Density, **1**: 137
 - Refractive index, **1**: 137, 166
- Nicaragua**, weights and measures, **1**: 5
- Nichroloy**, **2**: 380
- Nichrome**, **2**: 380, 467, 480, 608
 - Brightness temperature, **1**: 60; **5**: 245
 - Electrical conductivity, **6**: 193
 - Magnetic field, effect of, **6**: 422
 - Hall effect, **6**: 417
 - Nernst effect, **6**: 421
 - Righi-Leduc effect, **6**: 421
 - Thermoelectric properties, **6**: 220
- Ni-chro-zink**, **2**: 380
- Nickel**
 - Absorption, index of, **5**: 250, 252
 - Admiralty, **2**: 370, 601
 - Boiling point, **1**: 102; **3**: 205
 - Brightness, **5**: 246
 - Brightness temperature, **5**: 245
 - Cathodoluminescence, **5**: 390
 - Color temperature, **5**: 246
 - Commercial
 - Elastic properties, **2**: 480
 - Electrical conductivity, **6**: 192
 - Mechanical properties, **2**: 480
 - Thermal expansion, **2**: 473
 - Compressibility, **3**: 47, 48
 - Contact potential, **6**: 57
 - Copper, diffusion in, **5**: 77
 - Corbino effect, **6**: 419
 - Critical potentials, **6**: 71
 - Curie point, **6**: 410
 - Density, **1**: 104; **2**: 456
 - Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 104; **6**: 136–138, 140
 - Low temperature, **6**: 128, 133
 - Magnetic field, effect of, **6**: 423, 424
 - Electrode potential, **6**: 320, 332; **7**: 282
 - Electron emission excited by positive ions, **6**: 65

Nickel.—(Continued)

- Electronic structure, normal and excited, **6**: 71
- Electrons, reflection of, **6**: 63
- Electrons, secondary emission of, **6**: 63
- Electrons, thermal emission of, **6**: 53
- Electrons, transmitted, velocity of, **6**: 62
- Electrons excited by X-rays, number of, **6**: 5
- Emission, spectral, **5**: 242, 255
- Emission spectra, **5**: 307
- Endurance limits, **2**: 600, 604, 606
- Ettingshausen effect, **6**: 419
- Hall effect, **6**: 416, 418
- Heat of fusion, **1**: 104; **2**: 458
- Heat of transformation, **2**: 458; **5**: 192
- Heat of vaporization, **1**: 102
- Hydrogen, permeability to, **5**: 76
- Hydrogen, solubility of, in, **3**: 270
- Ionization, atomic, **6**: 122
- Isotopes, **1**: 47
- Joule effect, **6**: 440
- Kerr constant, **6**: 436
- Magnetic moment, **6**: 346
- Magnetic properties, **6**: 375, 376, 403–406
- Magnetization by rotation, **6**: 347
- Magneton number, **6**: 346
- Melting point, **1**: 54, 104
- Nernst effect, **6**: 420, 421
- Oxidized, emission, spectral, **5**: 244
- Peltier coefficient, **6**: 227, 228
- Persistent lines, **5**: 323
- Photoelectric threshold, **6**: 68
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 250, 252
- Righi-Leduc effect, **6**: 421
- Rotation by magnetization, **6**: 347
- Solution velocity in dissolved iodine, **5**: 57
- Solution velocity in salt solutions, **5**: 57
- Sound, velocity of, in, **6**: 465
- Specific heat
 - Liquid, **1**: 103; **5**: 94
 - Solid, **1**: 104; **5**: 93
- Spectral series, **5**: 402
- Thermal conductivity, **5**: 220, 221
- Magnetic field, effect of, **6**: 424
- Thermal expansion, **1**: 104; **2**: 461
- Thermionic work function, **6**: 53
- Thermochemistry, **5**: 192
- Thermoelectric properties, **6**: 214, 225, 226, 227
- Vapor pressure, **3**: 205
- Viscosity, **5**: 7
- Water vapor, reaction with, **7**: 282
- Wiedemann effect, **6**: 441
- X-ray absorption limits, **6**: 37
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 37
- X-ray series, limiting frequencies, **6**: 35
- X-rays
 - Absorption, discontinuity in, **6**: 12
 - Absorption coefficient, **6**: 13–15
 - Emission efficiency, **6**: 11
 - Scattering, modification by, **6**: 17
- Young's modulus, magnetic field, effect of, **6**: 440
- Zeeman effect, **5**: 420
- Aluminum*
- Aluminum*-Carbon-Iron-Manganese
- Aluminum*-Copper
- Aluminum*-Copper-Iron-Silicon
- Aluminum*-Copper-Iron-Silicon-Zinc
- Aluminum*-Copper-Magnesium
- Aluminum*-Copper-Magnesium-Man-ganese
- Aluminum*-Copper-Magnesium-Silicon
- Aluminum*-Magnesium
- Antimony*
- Arsenic*-Copper

Nickel.—(Continued)

- Bismuth*
- Boron*
- Cadmium*
- Carbon*-Cerium-Chromium-Iron
- Carbon*-Cerium-Iron
- Carbon*-Chromium-Copper-Iron
- Carbon*-Chromium-Iron
- Carbon*-Chromium-Iron-Manganese-Molybdenum
- Carbon*-Chromium-Iron-Molybdenum
- Carbon*-Chromium-Iron-Silicon
- Carbon*-Chromium-Iron-Uranium
- Carbon*-Chromium-Iron-Vanadium
- Carbon*-Copper-Iron
- Carbon*-Copper-Iron-Manganese
- Carbon*-Iron
- Carbon*-Iron-Manganese
- Carbon*-Iron-Manganese-Molybdenum
- Carbon*-Iron-Manganese-Silicon
- Carbon*-Iron-Molybdenum
- Carbon*-Iron-Silicon
- Carbon*-Iron-Uranium
- Carbon*-Iron-Vanadium
- Carbon*-Iron-Zirconium
- Chromium*
- Chromium*-Cobalt
- Chromium*-Copper
- Chromium*-Iron
- Chromium*-Iron-Manganese
- Chromium*-Iron-Silicon
- Chromium*-Iron-Silicon-Vanadium
- Cobalt*
- Cobalt*-Copper-Iron-Zinc
- Cobalt*-Iron
- Copper*
- Copper*-Gold
- Copper*-Iron
- Copper*-Iron-Manganese
- Copper*-Iron-Manganese-Zinc
- Copper*-Manganese
- Copper*-Molybdenum
- Copper*-Silver
- Copper*-Tin
- Copper*-Tin-Zinc
- Copper*-Titanium
- Copper*-Zinc
- Gold*
- Gold*-Silver
- Graphite*
- Hydrochloric acid*
- Iron*
- Iron*-Manganese
- Iron*-Manganese-Molybdenum-Silicon
- Iron*-Manganese-Silicon
- Iron*-Molybdenum
- Iron*-Molybdenum-Silicon
- Iron*-Silicon
- Iron*-Titanium
- Iron*-Tungsten
- Iron*-Vanadium
- Magnesium*
- Manganese*
- Molybdenum*
- Nickel oxide
 - Freezing point-solubility, **4**: 40
- Palladium
 - Equilibrium diagram, **2**: 439
- Phosphorus
 - Equilibrium diagram, **2**: 440
 - Freezing point-solubility, **4**: 29
- Silicon
 - Absorption, index of, **5**: 251
 - Density, **2**: 594
 - Equilibrium diagram, **2**: 440
 - Refraction, index of, **5**: 251
 - Specific heat, **5**: 121
 - Thermal expansion, **2**: 467
- Silver
 - Equilibrium diagram, **2**: 422

* Data for system will be found under this compound in Index. Full explanation on page vii.

Nickel.—(Continued)

- Sulfur
 - Freezing point-solubility, **4**: 26
- Tantalum
 - Thermoelectric properties, **6**: 221
- Tellurium
 - Specific heat, **5**: 121
- Thallium
 - Equilibrium diagram, **2**: 439
- Tin
 - Curie point, **6**: 410
- Titanium
 - Electrical conductivity, **6**: 194
 - Thermoelectric properties, **6**: 221
- Tungsten
 - Equilibrium diagram, **2**: 439
 - Thermoelectric properties, **6**: 221
- Vanadium
 - Equilibrium diagram, **2**: 440
 - Thermoelectric properties, **6**: 221
- Zinc
 - Electrical conductivity, **6**: 194
 - Equilibrium diagram, **2**: 439
- Zirconium
 - Thermoelectric properties, **6**: 221
- Nickel acetate**
 - Absorption spectra, solutions, **5**: 327
 - Ammines, decomposition pressure, **7**: 285
 - Electrical conductivity, aqueous solution, **6**: 245
 - Freezing point lowering of aqueous solution, **4**: 256
 - Specific heat, aqueous solution, **5**: 123
- Nickel antimonide**
 - X-ray crystal structure, **1**: 343
- Nickel antimony sulfide**
 - X-ray diffraction data, **1**: 343
 - See also Ullmannite.
- Nickel arsenic sulfide**
 - X-ray diffraction data, **1**: 343
 - See also Gersdorffite.
- Nickel arsenide**
 - X-ray diffraction data, **1**: 343
 - See also Nicollite.
- Cobalt arsenide*
- Nickel benzenesulfonate**
 - Ammine, decomposition pressure, **7**: 286
- Nickel benzoate**
 - Ammines, decomposition pressure, **7**: 286
- Nickel bromide**
 - Absorption spectra, solutions, **5**: 327, 328
 - Ammines
 - Decomposition pressure, **7**: 283
 - Heat of decomposition, **7**: 283
 - Heat of formation, **5**: 192
 - Density, aqueous solution, **3**: 69
 - Dimethylamine complex
 - Decomposition pressure, **7**: 284
 - Heat of decomposition, **7**: 284
 - Electrical conductivity, aqueous solution, **6**: 234, 239
 - Ethylamine complexes
 - Decomposition pressure, **7**: 284
 - Heat of decomposition, **7**: 284
 - Heat of formation, **5**: 192
 - Magnetic susceptibility, **6**: 358
 - Aqueous solution, **6**: 364
 - Methylamine complex
 - Decomposition pressure, **7**: 284
 - Heat of decomposition, **7**: 284
 - Refractive index, aqueous solution, **7**: 71
 - Dispersion, **7**: 101
 - Solubility in aluminum bromide, **4**: 61
 - Solubility in water, **4**: 225
 - Quinoline
 - Boiling point elevation, **3**: 347
- Nickel carbide**, heat of formation, **5**: 192
- Nickel carbonate**
 - Thermal conductivity, **5**: 217

- Nickel carbonyl**
 - Absorption spectra, solutions, **5**: 328
 - Density, **3**: 23
 - Electrical conductivity, **6**: 142
 - Ionization by γ -rays, **6**: 123
 - Ionization by X-rays, **6**: 123
 - Magnetic susceptibility, **6**: 358
 - Specific heat, **5**: 98
 - Surface tension, **4**: 447
 - Vapor pressure, **3**: 214
- Nickel chlorate**
 - Ammine
 - Decomposition pressure, **7**: 283
 - Heat of decomposition, **7**: 283
 - Density, aqueous solution, **3**: 69, 104
 - Electrical conductivity, aqueous solution, **6**: 245, 254
 - Freezing point lowering of aqueous solution, **4**: 256
 - Refractive index, aqueous solution, **7**: 71
 - Dispersion, **7**: 101
 - Solubility in water, **4**: 225
- Nickel chloride**
 - Absorption spectra, solutions, **5**: 327, 328
 - Ammine
 - Absorption spectra, **5**: 327
 - Decomposition pressure, **7**: 283
 - Heat of decomposition, **7**: 283
 - Heat of formation, **5**: 192
 - Boiling point elevation in aqueous solution, **3**: 325
 - Decomposition pressure of hydrates, **7**: 283
 - Density, aqueous solution, **3**: 69, 107
 - Diffusion in water, **5**: 66
 - Electrical conductivity, aqueous solution, **6**: 231, 233
 - Ethylamine complex
 - Decomposition pressure, **7**: 283
 - Heat of decomposition, **7**: 283
 - Freezing point lowering of aqueous solution, **4**: 256
 - Heat of formation, **5**: 192
 - Magnetic susceptibility, **6**: 358
 - Aqueous solution, **6**: 364
 - Methylamine complex
 - Decomposition pressure, **7**: 283
 - Heat of decomposition, **7**: 283
 - Refractive index, aqueous solution, **7**: 71
 - Dispersion, **7**: 100
 - Solubility in water, **4**: 225
 - Specific heat, aqueous solution, **5**: 123
 - Vapor pressure, aqueous solution, **3**: 367
 - Vapor pressure lowering in aqueous solution, **3**: 294
 - Verdet constant, aqueous solution, **6**: 427
 - Viscosity, aqueous solution, **5**: 14
 - X-rays, absorption coefficient, **6**: 13
 - Ammonium chloride*
 - Ethyl ether*
 - Ferric chloride*
 - Hydrogen*
 - Hydrogen chloride*
 - Methyl alcohol*
 - Nickel nitrate-Nickel sulfate
 - Refractive index, **7**: 98
 - Quinoline
 - Boiling point elevation, **3**: 347
- Nickel chromium steels.** See Chromium nickel steels.
- Nickel cyanide**, heat of formation, **5**: 192
- Nickel dithionate**
 - Ammines
 - Decomposition pressure, **7**: 285
 - Heat of decomposition, **7**: 285
 - Heat of formation, **5**: 192
- Nickel fluoride**
 - Magnetic susceptibility, **6**: 358
 - Aqueous solution, **6**: 364

- Nickel fluosilicate**
 - Density, **1**: 132
 - Refractive index, **1**: 132, 166; **7**: 22
 - Thermal conductivity, **5**: 231
- Nickel formate**
 - Ammine
 - Decomposition pressure, **7**: 285
 - Heat of decomposition, **7**: 285
- Nickel hydrogen fluoride**
 - Refractive index, **7**: 22
- Nickel hypophosphite**
 - Ammine
 - Decomposition pressure, **7**: 285
 - Heat of decomposition, **7**: 285
- Nickel iodate**
 - Ammine, decomposition pressure, **7**: 284
 - Solubility in water, **4**: 225, 246
- Nickel iodide**
 - Absorption spectra, solutions, **5**: 328
 - Ammines
 - Decomposition pressure, **7**: 284
 - Heat of decomposition, **7**: 284
 - Dimethylamine complex
 - Decomposition pressure, **7**: 284
 - Heat of decomposition, **7**: 284
 - Ethylamine complex
 - Decomposition pressure, **7**: 284
 - Heat of decomposition, **7**: 284
 - Heat of formation, **5**: 192
 - Methylamine complex
 - Decomposition pressure, **7**: 284
 - Heat of decomposition, **7**: 284
 - Propylamine complex, decomposition pressure, **7**: 284
 - Solubility in water, **4**: 225
 - Trimethylamine complex, decomposition pressure, **7**: 284
- Nickel naphthalene-1, 5-disulfonate**
 - Crystallography, **1**: 321
 - Density, **1**: 132
 - Refractive index, **1**: 132, 171
- Nickel naphthalene-2-sulfonate**
 - Ammine, decomposition pressure, **7**: 286
- Nickel o-naphthoylebenzoate**
 - Ammine, decomposition pressure, **7**: 286
- Nickel nitrate**
 - Absorption spectra, solutions, **5**: 327, 328
 - Ammine
 - Decomposition pressure, **7**: 285
 - Heat of decomposition, **7**: 285
 - Density, aqueous solution, **3**: 69, 107
 - Diffusion in water, **5**: 66
 - Electrical conductivity, **6**: 148
 - Aqueous solution, **6**: 237, 240
 - Freezing point lowering of aqueous solution, **4**: 256
 - Heat of formation, **5**: 192
 - Heat of fusion, **5**: 131
 - Magnetic susceptibility, **6**: 358
 - Aqueous solution, **6**: 364
 - Refractive index, aqueous solution, **7**: 71
 - Dispersion, **7**: 101
 - Solubility in water, **4**: 226
 - Specific heat, **5**: 98
 - Aqueous solution, **5**: 123
 - Vapor pressure lowering in aqueous solution, **3**: 294
 - Viscosity, aqueous solution, **5**: 14
 - Neodymium nitrate*
 - Nickel chloride*-Nickel sulfate
 - Praseodymium nitrate
 - Freezing point-solubility in water, **4**: 363
- Nickel nitride**, heat of formation, **5**: 192
- Nickel nitrite**
 - Ammine
 - Decomposition pressure, **7**: 285
 - Heat of decomposition, **7**: 285
 - Electrical conductivity, aqueous solution, **6**: 245

* Data for system will be found under this compound in Index. Full explanation on page vii.

Nickel oxide

- Brightness temperature, **1**: 60
- Decomposition pressure, **7**: 282
- Electrical conductivity, **6**: 154
- Electrons, thermal emission of, **6**: 54
- Emission, spectral, **5**: 242
- Heat of formation, **5**: 192
- Magnetic susceptibility, **6**: 358
- Thermal conductivity, **5**: 217
- Thermionic work function, **6**: 54
- Thermoelectric power, **6**: 224
- X-ray diffraction data, **1**: 343
- Magnesium oxide**
- Nickel**
- Silica*

Freezing point-solubility, **4**: 85

Nickel perchlorate

- Ammine, decomposition pressure, **7**: 283
- Decomposition pressure of hydrate, **7**: 283
- Density, aqueous solution, **3**: 104
- Freezing point lowering of aqueous solution, **4**: 256
- Melting point, **1**: 131
- Refractive index, **1**: 131, 165
- Solubility in water, **4**: 225

Nickel potassium cyanide, freezing point lowering of aqueous solution, **4: 260****Nickel potassium dithiooxalate**

- Crystallography, **1**: 323
- Density, **1**: 157
- Refractive index, **1**: 157, 165

Nickel potassium selenate

- Density, **1**: 157
- Emission, spectral, **5**: 259
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 157, 170; **7**: 31

Nickel potassium sulfate

- Absorption spectra, solutions, **5**: 327
- Density, **1**: 157
- Dielectric constant, **6**: 99
- Hydrate
 - Decomposition pressure, **7**: 308
 - Heat of decomposition, **7**: 308
 - Refractive index, **1**: 157, 169; **7**: 31
 - Solubility in water, **4**: 242
 - Specific heat, **5**: 101

Nickel rubidium selenate

- Refractive index, **7**: 31

Nickel rubidium sulfate

- Density, **1**: 160
- Hydrate
 - Decomposition pressure, **7**: 310
 - Heat of decomposition, **7**: 310
 - Refractive index, **1**: 160, 169
 - Solubility in water, **4**: 243

Nickel selenate

- Ammine, decomposition pressure, **7**: 285
- Density, **1**: 131
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 131, 166; **7**: 22

Nickel selenide

- Heat of formation, **5**: 192
- X-ray diffraction data, **1**: 343

Nickel sesquioxide

- Brightness temperature, **5**: 245
- Radiation temperature, total, **5**: 246

Nickel silvers, **2: 380, 475, 480, 601**

- Annealing range, **2**: 482
- Electrical conductivity, **6**: 171
- List of, **2**: 389

Nickel sodium sulfate

- Solubility in water, **4**: 238

Nickel steels

- Critical range, **2**: 483
- Electrical conductivity, **6**: 184, 186
- Endurance limits, **2**: 600-608
- Hardness, **2**: 481
- Impact strength, **2**: 482
- Magnetic properties, **6**: 386, 394, 395
- Mechanical properties, **2**: 481

Nickel steels.—(Continued)

- Thermal conductivity, **5**: 225
- Thermal expansion, **2**: 471
- Thermoelectric properties, **6**: 223
- Torsion tests, **2**: 482

Nickel subsulfide

- Cuprous sulfide**
- Sodium sulfide*
- Freezing point-solubility, **4**: 61, 78

Nickel sulfate

- Absorption spectra, solutions, **5**: 327, 328
- Ammines
 - Decomposition pressures, **7**: 285
 - Heat of decomposition, **7**: 285
- Boiling point elevation in aqueous solution, **3**: 325
- Decomposition pressure of hydrates, **7**: 284
- Density, **1**: 131
- Aqueous solution, **3**: 69, 107
- Electrical conductivity, aqueous solution, **6**: 236, 240
- Freezing point lowering of aqueous solution, **4**: 256
- Heat of formation, **5**: 192
- Magnetic susceptibility, **6**: 358, 364
- Aqueous solution, **6**: 364
- Optical rotatory power, **7**: 353
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 131, 166; **7**: 22
- Aqueous solution, **7**: 71
- Solubility in sulfuric acid, **4**: 43
- Solubility in water, **4**: 226
- Solution velocity in water, **5**: 56
- Specific heat, **5**: 98
- Aqueous solution, **5**: 123
- Surface tension, aqueous solution, **4**: 465
- Thermal conductivity, **5**: 217, 232
- Transition point of hydrate, **1**: 131
- Vapor pressure lowering in aqueous solution, **3**: 294
- Viscosity, aqueous solution, **5**: 14

-*Ammonium sulfate**-*Cupric sulfate*

-*Methyl alcohol**

-*Nickel chloride**-*Nickel nitrate*

-*Potassium chromate*

Density, aqueous solution, **3**: 98

-*Potassium sulfate*

Freezing point-solubility in water, **4**: 345

Surface tension, aqueous solution, **4**: 470

-*Sodium sulfate*

Freezing point-solubility in water, **4**: 345

Nickel sulfide

- Heat of formation, **5**: 192
- Photoelectric current, **6**: 69
- Specific heat, **5**: 98
- X-ray diffraction data, **1**: 343
- See also Millerite.

-*Cuprous cyanide**

Nickel telluride, heat of formation, **5: 192****Nickel tetrathionate**

- Ammine
 - Decomposition pressure, **7**: 285
 - Heat of decomposition, **7**: 285

Nickel thallium selenate

- Refractive index, **7**: 32

Nickel thallium sulfate

- Refractive index, **7**: 31
- Solubility in water, **4**: 226

Nickel thiocyanate

- Ammine
 - Decomposition pressure, **7**: 285
 - Heat of decomposition, **7**: 285

Nickel thiosulfate

- Ammine
 - Decomposition pressures, **7**: 285
 - Heat of decomposition, **7**: 285

Nickel uranium steel

- Mechanical properties, **2**: 478

Nickel vanadium steel

- Analyses, table of, **2**: 487
- Endurance limits, **2**: 605
- Mechanical properties, **2**: 513

Nickel zirconium steels

- Endurance limits, **2**: 605
- Mechanical properties, **2**: 532

Nickelene (alloy), **2: 380****Nickelic hydroxide**

- Heat of formation, **5**: 192

Nickelic sulfide

- Transition temperature, **4**: 7
- Sodium sulfide*
- Freezing point-solubility, **4**: 61, 78

Nickeline (alloy), **2: 380; cf. 475, 480, 601, 606**

- Electrical conductivity, **6**: 171
- Peltier coefficient, **6**: 227
- Thermoelectric properties, **6**: 222
- Thomson coefficient, **6**: 228

Nickelous hydroxide

- Heat of formation, **5**: 192
- Magnetic susceptibility, **6**: 358

Nickelous ion

- Water, reaction with, **7**: 283

Nickelous oxide

- Hydrogen, reduction with, **7**: 282
- See also Bunsenite.

Nickeloy, **2: 380; cf. 534****Nicollite**

- Density, **1**: 132
- Melting point, **1**: 132
- See also Nickel arsenide.

Nicotine

- Absorption spectra, **5**: 333, 346
- Density, **3**: 30, 34
- Aqueous solution, **3**: 112, 113, 115
- Diffusion in water, **5**: 71
- Electrical conductivity, aqueous solution, **6**: 296
- Heat of combustion, **5**: 168
- Optical rotatory power, **7**: 408
- Refractive index
 - Aqueous solution, **7**: 69
 - Liquid, **7**: 51
- Solubility in water, **3**: 392
- Pressure, effect of, **3**: 393
- Acetic acid**
- Acetone**
- Aniline**
- Benzene**
- Chloroform**
- Ethyl alcohol**
- Ethyl bromide**
- Ethyl ether**
- Formamide**
- Hydrochloric acid**
- Isobutyl alcohol**
- Methyl alcohol**
- Nitrous oxide*

Vapor pressure, **3**: 285

-*Propyl alcohol*

Density, **3**: 164

-*Sodium hydroxide*

Miscibility of, in water, **3**: 409

-*Sodium sulfate*

Miscibility of, in water, **3**: 409

Nicotine dihydrochloride

- Heat of solution in water, **5**: 150

Nicotinic acid, absorption spectra, **5: 369****Niobium fluoride**

- Vapor pressure
 - Liquid, **3**: 214
 - Solid, **3**: 208

Niter. See Potassium nitrate.

Nitramide

- Decomposition, kinetics of, **7**: 120

Nitrate ion, free energy, **7: 239**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Nitric acid

- Absorption spectra, solutions, **5**: 327, 328
- Activity coefficients, **7**: 239
- Birefringence, magnetic, **7**: 110
- Boiling point, **1**: 108, 162; **3**: 309
 - Maximum, **3**: 323
- Compressibility, **3**: 439
 - Liquid, **3**: 35
- Density
 - Aqueous solution, **3**: 58
 - Liquid, **1**: 108; **3**: 23
 - Maximum, temperature of, **3**: 107
- Dielectric constant, **6**: 76
- Diffusion in water, **5**: 64
- Electrical conductivity, aqueous solution, **6**: 241, 242
- Free energy
 - Aqueous solution, **7**: 239
 - Gas, **7**: 239
 - Solution, **7**: 239
- Freezing point lowering of aqueous solution, **4**: 255
- Heat of formation, **5**: 179
- Heat of fusion, **5**: 131
- Heat of neutralization, **5**: 212
- Heat of vaporization, **5**: 136
- Magnetic susceptibility, **6**: 356
- Melting point, **1**: 108
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 108, 165
 - Aqueous solution, **7**: 66
- Solubility in water, **4**: 217
- Sound, velocity of, in, **6**: 464
- Specific heat, aqueous solution, **5**: 122
- Surface tension, aqueous solution, **4**: 464
- Transference number, **6**: 310
- Vapor pressure, partial, **3**: 304
- Verdet constant, **6**: 426
- Viscosity, aqueous solution, **5**: 13, 26
- Acetic acid*
- Acetone*-Bismuth nitrate
- Aluminum nitrate*
- Ammonium dichloroacetate*
- Ammonium nitrate*
- Ammonium sulfate*
- Auric hydroxide*
- Aurous oxide*
- Barium nitrate*
- Barium oxide*
- Barium sulfate*
- Benzoic acid*
- Bismuth hydroxide*
- Calcium chloride*-Potassium dichromate
- Calcium hydroxide*
- Chromic acid*
- Cupric nitrate*
- Cupric sulfate*
- Ethyl ether*
- Ferric oxide*
- Hydrogen chloride*
- Iodic acid*
- Lead chloride*
- Lead chromate*
- Lead iodide*
- Lead nitrate*
- Lead sulfate*
- Magnesium nitrate*
- Magnesium sulfate*
- Mercuric nitrate*
- Mercuric oxide*
- Mercurous nitrate*
- Nitrogen tetroxide
 - Boiling point, **3**: 311
 - Density, **3**: 133
 - Freezing point-solubility, **4**: 44
- Nitroguanidine
 - Freezing point-solubility in water, **4**: 398
- Oxalic acid
 - Density, aqueous solution, **3**: 101
 - Freezing point-solubility in water, **4**: 398

Nitric acid.—(Continued)

- Phenanthraquinone
 - Freezing point-solubility in water, **4**: 399
- Phthalic acid
 - Freezing point-solubility in water, **4**: 399
- Picric acid
 - Freezing point-solubility in water, **4**: 398
- Potassium dichloroacetate
 - Density, aqueous solution, **3**: 97
- Potassium hydroxide
 - Freezing point-solubility in water, **4**: 365
- Potassium nitrate
 - Density, aqueous solution, **3**: 97
- Potassium nitrate-Uranyl nitrate
 - Freezing point-solubility in water, **4**: 363
- Potassium sulfate
 - Density, aqueous solution, **3**: 97
- Raffinose
 - Density, aqueous solution, **3**: 101
- Salicylic acid
 - Freezing point-solubility in water, **4**: 399
- Silver acetate
 - Density, aqueous solution, **3**: 97; **7**: 270
 - Solubility in water, **7**: 270
- Silver benzoate
 - Solubility in water, **7**: 324
- Silver chloroacetate
 - Density, aqueous solution, **3**: 97
 - Solubility in water, **7**: 324
- Silver chromate
 - Solubility in water, **7**: 287
- Silver iodate
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility in water, **4**: 320; **7**: 323
- Silver nitrate
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility in water, **4**: 362
- Silver oxalate
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility in water, **4**: 359; **7**: 326
- Silver sulfate
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility in water, **4**: 324; **7**: 324
- Sodium dichloroacetate
 - Density, aqueous solution, **3**: 97
- Sodium hydrogen sulfate
 - Density, aqueous solution, **3**: 97
- Sodium nitrate
 - Density, aqueous solution, **3**: 97
- Sodium nitrate-Sodium sulfate
 - Density, aqueous solution, **3**: 100
- Sodium sulfate
 - Density, aqueous solution, **3**: 97
- Sodium sulfate-Sulfuric acid
 - Density, aqueous solution, **3**: 100
- Strontium chloride
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility in water, **4**: 290
- Strontium sulfate
 - Freezing point-solubility in water, **4**: 324
- Styphnic acid
 - Freezing point-solubility in water, **4**: 399
- Suberic acid
 - Freezing point-solubility in water, **4**: 399

Nitric acid.—(Continued)

- Succinic acid
 - Freezing point-solubility in water, **4**: 398
- Sulfuric acid
 - Boiling points, **3**: 306, 314
 - Density, **3**: 133
 - Aqueous solution, **3**: 96
 - Freezing point-solubility, **4**: 43
 - Freezing point-solubility in water, **4**: 322
 - Specific heat, **5**: 125
 - Aqueous solution, **5**: 129
 - Vapor compositions, **3**: 306
 - Vapor pressure, **3**: 306
 - Viscosity, **5**: 26
 - Aqueous solution, **5**: 18
- Thallous chloride
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility in water, **4**: 290; **7**: 319
- Thallous sulfate
 - Freezing point-solubility in water, **4**: 323
- Uranyl nitrate
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility in water, **4**: 363
- Zinc nitrate
 - Density, aqueous solution, **3**: 97
- Zinc sulfate
 - Density, aqueous solution, **3**: 97
- Nitric oxide**
 - Band spectra, **5**: 415, 417
 - Boiling point, **1**: 107, 162; **3**: 229
 - Compressibility, gas, **3**: 14
 - Contact potential, **6**: 57
 - Critical point data, **3**: 229, 248
 - Critical potentials, **6**: 72
 - Decomposition, kinetics of, **7**: 117
 - Density
 - Gas, **3**: 3
 - Liquid, **1**: 107; **3**: 22
 - Dispersion formula, **7**: 11
 - Dissociation, work of, **6**: 72
 - Electrons, motion of, in, **6**: 116
 - Free energy, **7**: 238, 239
 - Formation, **7**: 238
 - Reaction with chlorine, **7**: 240
 - Reaction with nitric acid, **7**: 239
 - Reaction with oxygen, **7**: 239
 - Sublimation, **7**: 239
 - Vaporization, **7**: 239
 - Heat content
 - Liquid, **7**: 238
 - Solid, **7**: 239
 - Heat of dissociation, **5**: 418
 - Heat of formation, **5**: 178
 - Heat of fusion, **5**: 131
 - Heat of sublimation, **7**: 239
 - Heat of vaporization, **7**: 239
 - Ionization by α -particles, **6**: 122
 - Magnetic moment, **6**: 352
 - Magnetic susceptibility, **6**: 356
 - Melting point, **1**: 107
 - Polarization of light scattered by, **5**: 265
 - Refractive index
 - Gas, **7**: 8
 - Liquid, **1**: 107, 165
 - Solubility in non-aqueous liquids, **3**: 264
 - Solubility in sulfuric acid, **3**: 276
 - Solubility in water, **3**: 259
 - Sound, velocity of, in, **6**: 462
 - Specific heat
 - Gas, **5**: 80, 81; **7**: 238
 - Liquid, **5**: 86; **7**: 238
 - Solid, **5**: 86; **7**: 239
 - Thermal conductivity, **5**: 213, 215
 - Thermal expansion, **3**: 16
 - Transmission of radiant energy, **5**: 270

* Data for system will be found under this compound in Index. Full explanation on page vii.

Nitric oxide.—(Continued)

- Vapor pressure
 - Liquid, **3**: 213
 - Solid, **3**: 207
- Vapor pressure above 1 atm., **3**: 229
- Viscosity, gas, **5**: 3
- Bromine*
- Hydrogen*
- Nitrogen tetroxide
 - Freezing point-solubility, **4**: 43
- Nitriles, hydrolysis of, **7**: 141
- Nitrite ion, free energy, **7**: 239
- Nitroacenaphthene
 - Picric acid
 - Freezing point-solubility, **4**: 121
 - Styphnic acid
 - Freezing point-solubility, **4**: 122
- Nitroacetanilides
 - Heat of combustion, **5**: 168
 - Solubility in water, **3**: 391; **4**: 252
 - Vapor pressure
 - Liquid, **3**: 224
 - Solid, **3**: 209
 - Benzene*
- m*-Nitroacetanilide
 - Crystallography, **1**: 328
 - Benzene*
- p*-Nitroacetanilide
 - Acetic acid*
 - Benzene*
 - 2, 4-Dinitroacetanilide*
- m*-Nitro-*p*-acetotoluide
 - Cryoscopic constant, **4**: 183
- Nitroamine, electrical conductivity, aqueous solution, **6**: 260
- o*-Nitroaniline
 - Absorption spectra, **5**: 339
 - Boiling point, **3**: 221
 - Heat of combustion, **5**: 168
 - Heat of fusion, **5**: 133
 - Solubility in water, **3**: 389
 - Specific heat
 - Liquid, **5**: 110
 - Solid, **5**: 103
 - Vapor pressure, **3**: 221
 - Acetone*
 - Benzene*
 - Camphor*
 - 2, 4-Dinitroaniline*
 - 2, 4-Dinitrochlorobenzene*
 - Isoamyl acetate*
 - Nitroaniline (*m*-, *p*-)
 - Freezing point-solubility, **4**: 168
 - Nitrobenzene
 - Freezing point-solubility, **4**: 176
 - m*-Xylene
 - Freezing point-solubility, **4**: 135
- m*-Nitroaniline
 - Absorption spectra, **5**: 339
 - Boiling point, **3**: 221
 - Boiling point elevation in aqueous solution, **3**: 327
 - Diffusion in methyl alcohol, **5**: 73
 - Heat of combustion, **5**: 168
 - Heat of fusion, **5**: 133
 - Solubility in water, **3**: 389
 - Specific heat
 - Liquid, **5**: 110
 - Solid, **5**: 103
 - Surface tension, **4**: 454
 - Vapor pressure, **3**: 221
 - Acetanilide*
 - Benzene*
 - Camphor*
 - m*-Dinitrobenzene*
 - 2, 4-Dinitrochlorobenzene*
 - Ethyl alcohol*
 - Isoamyl acetate*
 - Naphthalene*

***m*-Nitroaniline.**—(Continued)

- Nitrobenzene
 - Boiling point elevation, **3**: 343
 - Freezing point-solubility, **4**: 176
- Tetryl
 - Freezing point-solubility, **4**: 135
- 1, 3, 5-Trinitrobenzene
 - Freezing point-solubility, **4**: 118
- m*-Xylene
 - Freezing point-solubility, **4**: 135
- p*-Nitroaniline
 - Absorption spectra, **5**: 339
 - Heat of combustion, **5**: 168
 - Heat of fusion, **5**: 133
 - Heat of solution in water, **5**: 149
 - Solubility in water, **3**: 389; **4**: 252
 - Specific heat
 - Liquid, **5**: 110
 - Solid, **5**: 103
 - Surface tension, **4**: 454
 - Vapor pressure
 - Liquid, **3**: 221
 - Solid, **3**: 209
 - Acetone*
 - Benzene*
 - Camphor*
 - 2, 4-Dinitroaniline*
 - m*-Dinitrobenzene*
 - Ethyl alcohol*
 - Nitrobenzene
 - Freezing point-solubility, **4**: 176
 - p*-Nitroaniline
 - Freezing point-solubility, **4**: 135
 - Propyl alcohol
 - Boiling point elevation, **3**: 340
 - Tetryl
 - Freezing point-solubility, **4**: 135
 - 1, 3, 5-Trinitrobenzene
 - Freezing point-solubility, **4**: 118
 - m*-Xylene
 - Freezing point-solubility, **4**: 135
- Nitroanisole
 - Absorption spectra, **5**: 341
 - Dielectric constant, **6**: 92
- o*-Nitroanisole
 - Refractive index, **7**: 40
 - Surface tension, **4**: 456
 - Diethyl tartrate*
 - Iodine*-Potassium iodide
- p*-Nitroanisole
 - Melting point under pressure, **4**: 10
 - Refractive index, **7**: 40
 - Surface tension, **4**: 456
 - Diethyl tartrate*
 - Diphenylamine*
 - Urethan
 - Freezing point-solubility, **4**: 112
- Nitrobarite. See Barium nitrate.
- o*-Nitrobenzaldehyde
 - Activity coefficient, **7**: 246
 - Free energy of solution, **7**: 246
 - Photochemical oxidation, **7**: 169, 170
 - Solubility in water, **3**: 390
 - Benzene*
 - Trichloroacetic acid
 - Freezing point-solubility, **4**: 102
- m*-Nitrobenzaldehyde
 - Diffusion in methyl alcohol, **5**: 73
 - Heat of combustion, **5**: 168
 - Solubility in water, **3**: 390
 - Benzene*
 - Phenol
 - Freezing point-solubility, **4**: 135
 - Trichloroacetic acid
 - Freezing point-solubility, **4**: 102
- p*-Nitrobenzaldehyde
 - Cryoscopic constant, **4**: 183
 - Solubility in water, **3**: 390
 - Acenaphthene*
 - Benzene*

***p*-Nitrobenzaldehyde.**—(Continued)

- Sulfuric acid
 - Freezing point-solubility, **4**: 188
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 102
- Nitrobenzaldehydes
 - Absorption spectra, **5**: 340
 - Vapor pressure, **3**: 222
- m*-Nitrobenzaldoxime
 - Dielectric constant, **6**: 91
- Nitrobenzene
 - Absorption spectra, **5**: 332, 339
 - Azeotropic mixtures, **3**: 322
 - Birefringence, **7**: 110, 111, 113
 - Boiling point, **3**: 221, 343
 - Chlorination, kinetics of, **7**: 146
 - Compressibility, **3**: 39
 - Cryoscopic constant, **4**: 183, 215
 - Density, **3**: 29, 33
 - Solid, **3**: 45
 - Dielectric constant, **6**: 82, 89, 105
 - Diffusion in benzene, **5**: 74
 - Diffusion in methyl alcohol, **5**: 72
 - Electrical conductivity, **6**: 144
 - Flash point, **2**: 162
 - Heat of combustion, **5**: 168
 - Heat of fusion, **5**: 133
 - Heat of vaporization, **5**: 137
 - Heat of wetting, **5**: 142
 - Interfacial tension against various solutions, **4**: 438
 - Magnetic susceptibility, **6**: 362
 - Melting point, **3**: 45; **4**: 6
 - Melting point under pressure, **4**: 15
 - Polarization of light reflected from, **5**: 261
 - Polarization of light scattered by, **5**: 267
 - Refractive index, **7**: 12, 38
 - Solubility in water, **3**: 389
 - Sound, velocity of, in, **6**: 464
 - Specific heat
 - Liquid, **5**: 110
 - Solid, **5**: 103
 - Surface tension, **4**: 436, 454
 - Thermal conductivity, **5**: 228
 - Toxicology, **2**: 320
 - Vapor pressure, **3**: 221
 - Verdet constant, **6**: 427
 - Viscosity, **5**: 45; **7**: 217, 223
 - Volume change on melting, **4**: 15
 - Acenaphthene*
 - Acetanilide*
 - Acetic acid*
 - Acetone*
 - Alizarin*
 - Aluminum bromide*
 - Aluminum chloride*
 - Ammonium iodide*-Iodine
 - Aniline*
 - Anthracene*
 - Anthraquinone*
 - Antimony tribromide*
 - Antimony trichloride*
 - Arsenous oxide*
 - Azobenzene*
 - p*-Azoxyanisole*
 - Barium iodide*-Iodine
 - Benzene*
 - Benzidine*
 - Benzil*
 - Benzoic acid*
 - Benzoic anhydride*
 - Benzoin*
 - Benzoyl chloride*
 - Bromine*
 - Bromine*-Potassium bromide
 - Bromoform*
 - Butane*
 - Camphoric acid*
 - Capronitrile*
 - Carbazole*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Nitrobenzene.—(Continued)

- Carbon dioxide*
- Carbon disulfide*
- Carbon tetrachloride*
- Cesium chloride*-Iodine
- Chloroform*
- o*-Cresol*
- Decacyclene*
- p*-Dibromobenzene*
- 1, 1-Dibromoethane*
- Diethyl diacetyltartrate*
- Diethyl tartrate*
- Diethyl tartrate*-Ethylene bromide
- Diethylaniline*
- Diisoamyl*
- Di-*l*-menthyl *l*-tartrate*
- Dimethyl *d*-dimethoxysuccinate*
- Dimethyl tartrate*
- Dimethyl terephthalate*
- Dimethylaniline*
- Dimethylphenylammonium iodide*-Iodine
- m*-Dinitrobenzene*
- Diphenyl*
- Diphenylamine*
- Durene*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl di(trichloroacetyl)tartrate*
- Ethyl ether*
- Ethyl trichloroacetate*
- Ethylaniline*
- Ethylene bromide*
- Ethylxanthic acid*
- Fluorene*
- Fluorocyclene*
- Hexane*
- Hydrogen peroxide*
- Iodine*
- Iodine*-Lithium iodide
- Iodine*-Phenylammonium iodide
- Iodine*-Potassium bromide
- Iodine*-Potassium chloride
- Iodine*-Potassium iodide
- Iodine*-Rubidium chloride
- Iodine*-Rubidium iodide
- Iodine*-Sodium iodide
- Iodine*-Strontium iodide
- Iodine*-Tetramethylammonium iodide
- Isoamyl alcohol*
- Isobutyl alcohol*
- Isobutyl diacetyl-*d*-tartrate*
- Isobutyl di(trichloroacetyl)tartrate*
- Isopentane*
- Menthol*
- Menthyl benzenesulfonate*
- Menthyl diacetyltartrate*
- Menthyl naphthalene- β -sulfonate*
- Menthyl tartrate*
- Mercuric iodide*
- Methyl *l*- α -acetoxypropionate*
- Methyl alcohol*
- Methyl benzoate*
- Methyl dibenzoylglycerate*
- Methyl di(trichloroacetyl)tartrate*
- Methyl lactate*
- Methyl *l*- α -methoxypropionate*
- Methyl mono(trichloroacetyl)tartrate*
- Methylaniline*
- Naphthalene*
- α -Naphthylamine*
- Nitroaniline (*o*-, *m*-, *p*-)
- Nitrogen tetroxide
- Boiling point elevation, **3**: 329
- Nitrosobenzene
- Freezing point-solubility, **4**: 128
- Nitrotoluene (*o*-, *p*-)
- Freezing point-solubility, **4**: 129
- Oleates
- Dielectric constant, **6**: 104

Nitrobenzene.—(Continued)

- Paraldehyde
- Density, **3**: 177
- Viscosity, **5**: 45
- Petroleum
- Solubility, mutual, **3**: 397
- Phenanthraquinone
- Boiling point elevation, **3**: 343
- Phenanthrene
- Density, **3**: 178
- Freezing point-solubility, **4**: 177
- Phenol
- Density, **3**: 176
- Freezing point-solubility, **4**: 176
- Viscosity, **5**: 45
- Phenyl salicylate
- Boiling point elevation, **3**: 343
- Phthalic anhydride
- Boiling point elevation, **3**: 343
- Potassium iodide
- Distribution coefficients in water, **3**: 422
- p*-Quinone
- Freezing point-solubility, **4**: 127
- Resorcinol
- Freezing point-solubility, **4**: 128
- Salicylic acid
- Density, **3**: 177
- Stearic acid
- Density, **3**: 178
- Sulfur
- Boiling point elevation, **3**: 343
- Tetrachloroethane
- Density, **3**: 154
- Viscosity, **5**: 36
- Tetraethylammonium iodide
- Density, **3**: 177
- Tetraphenylethane
- Boiling point elevation, **3**: 343
- Tetrapropylammonium iodide
- Density, **3**: 178
- Toluene
- Compressibility, **3**: 440
- Density, **3**: 177
- Dielectric constant, **6**: 103
- Surface tension, **4**: 473
- o*-Toluidine
- Density, **3**: 177
- Heat of solution, **5**: 157
- Surface tension, **4**: 473
- Viscosity, **5**: 45
- Triphenylmethane
- Boiling point elevation, **3**: 343
- Water
- Vapor pressure, **3**: 291
- m*-Nitrobenzenediazoethylamino-*p*-nitrobenzene**
- p*-Nitrobenzenediazoethylamino-*m*-nitrobenzene
- Freezing point-solubility, **4**: 164
- o*-Nitrobenzidine**
- Ethyl alcohol*
- Nitrobenzoic acid**
- Diffusion in methyl alcohol, **5**: 73
- Vapor pressure, **3**: 222
- o*-Nitrobenzoic acid**
- Absorption spectra, **5**: 341
- Activity coefficient, **7**: 246
- Boiling point elevation in aqueous solution, **3**: 327
- Electrical conductivity, aqueous solution, **6**: 278
- Free energy of ionization, **7**: 246
- Free energy of solution, **7**: 246
- Freezing point lowering of aqueous solution, **4**: 263
- Heat of combustion, **5**: 168
- Heat of fusion, **5**: 133
- Heat of solution in water, **5**: 150
- Ionization constant, **7**: 246

***o*-Nitrobenzoic acid.**—(Continued)

- Solubility in water, **3**: 391; **4**: 251, 252, 253
- Specific heat
- Liquid, **5**: 110
- Solid, **5**: 103
- Benzene*
- Chloroform*
- Dimethylpyrone*
- Ethyl acetate*
- Ethyl ether*
- Formic acid*
- Hydrogen chloride*
- Isoamyl alcohol*
- Malonic acid*
- Methyl alcohol*
- Methylpicric acid*
- Nitrobenzoic acid (*m*-, *p*-)
- Freezing point-solubility, **4**: 169
- Potassium nitrate
- Freezing point-solubility in water, **4**: 418
- Propyl alcohol
- Heat of solution, **5**: 153
- Salicylic acid
- Freezing point-solubility in water, **4**: 418
- Xylene
- Distribution coefficients in water, **3**: 429
- m*-Nitrobenzoic acid**
- Absorption spectra, **5**: 341
- Electrical conductivity, aqueous solution, **6**: 278
- Heat of combustion, **5**: 168
- Heat of fusion, **5**: 133
- Heat of solution in water, **5**: 150
- Solubility in water, **3**: 391; **4**: 252, 253
- Pressure, effect of, **3**: 393
- Specific heat
- Liquid, **5**: 110
- Solid, **5**: 103
- Benzene*
- Chloroform*
- Dimethylpyrone*
- Ethyl alcohol*
- Ethyl ether*
- Hydrogen chloride*
- Xylene
- Distribution coefficients in water, **3**: 429
- p*-Nitrobenzoic acid**
- Absorption spectra, **5**: 341
- Electrical conductivity, aqueous solution, **6**: 278
- Heat of combustion, **5**: 168
- Heat of fusion, **5**: 133
- Heat of solution in water, **5**: 150
- Solubility in water, **4**: 251, 252
- Specific heat
- Liquid, **5**: 110
- Solid, **5**: 103
- Vapor pressure
- Liquid, **3**: 222
- Solid, **3**: 209
- Benzene*
- Chloroform*
- Sodium *p*-nitrobenzoate
- Freezing point-solubility in water, **4**: 418
- Xylene
- Distribution coefficients in water, **3**: 429
- o*-Nitrobenzoyl chloride**
- Nitrobenzoyl chloride (*m*-, *p*-)
- Freezing point-solubility, **4**: 147, 170
- Nitrobenzyl chloride**
- Benzene*
- m*-Nitrobenzyl alcohol**
- Dielectric constant, **6**: 92

* Data for system will be found under this compound in Index. Full explanation on page vii.

o-Nitrobenzylidene chloride

- Nitrobenzylidene chloride (*m*-, *p*-)
Freezing point-solubility, **4**: 169
- Nitrobromobenzoic acids**, electrical conductivity, aqueous solution, **6**: 277
- Nitrocalite**. See Calcium nitrate.
- Nitrocamphene**
Optical rotatory power, **7**: 411
- Nitrocamphor**
Absorption spectra, **5**: 346
Heat of solution in water, **5**: 150
Optical rotatory power, **7**: 438
Verdet constant, **6**: 430
- Nitrocatechol**
-Camphor*
- Nitrocellulose**
Absorption spectra, **5**: 334
Moisture content at various humidities, **2**: 323
-Acetoethyl-*o*-toluidine*
-Acetone*
-Amyl acetate*
-Diethyl phthalate*
-Ethyl acetate*
-Ethyl butyrate*
-Ethyl formate*
-Ethyl *o*-toluylethylcarbamate*
-Methyl acetate*
-Propyl acetate
Density, **3**: 196
- Nitrocellulose explosives**, **7**: 496
- Nitrocellulose plastics**, **2**: 296
- 4-Nitro-2-chloroacetanilide**
-6-Nitro-2-chloroacetanilide
Freezing point-solubility, **4**: 153
- 4-Nitro-3-chloroacetanilide**
-6-Nitro-3-chloroacetanilide
Freezing point-solubility, **4**: 153
- Nitrochlorobenzene**, flash point, **2**: 162
- Nitrochlorobenzoic acids**, electrical conductivity, aqueous solution, **6**: 277
- Nitrocumic acid**
Crystallography, **1**: 330
Heat of solution in water, **5**: 150
- Nitrodiethylaniline**
-Nitrosodiethylaniline
Freezing point-solubility, **4**: 158
- Nitroethane**
Absorption spectra, **5**: 331, 335
Azeotropic mixtures, **3**: 320
Boiling point, **3**: 336
Dielectric constant, **6**: 82, 85
Heat of combustion, **5**: 167
Magnetic susceptibility, **6**: 361
Refractive index, **7**: 34
Surface tension, **4**: 449
-Benzil*
-Benzoic acid*
- Nitroform**, absorption spectra, **5**: 334
- p-Nitroethylaniline**
-p-Nitrosomonoethylaniline
Freezing point-solubility, **4**: 154
- o-Nitroformanilide**
-p-Nitroformanilide
Freezing point-solubility, **4**: 179
- Nitrogen**
Accommodation coefficient, **5**: 53
Adsorption by wood charcoal, **3**: 250
Adsorption on glass, **3**: 251
Band spectra, **5**: 415, 417
Boiling point, **1**: 53, 102; **3**: 203
Cathodoluminescence, **5**: 388
Compressibility, gas, **3**: 17
Contact potential, **6**: 57
Critical constants, **1**: 102; **3**: 204, 248
Critical potentials, **6**: 71, 72
Density
Gas, **1**: 102; **3**: 3
Liquid, **1**: 102; **3**: 20
Solid, **1**: 104; **3**: 21
Dielectric constant, **6**: 74, 79

Nitrogen.—(Continued)

- Diffusion in sodium chloride solution, **5**: 64
- Dispersion formula, **7**: 11
- Dissociation, work of, **6**: 72
- Electrons, absorption of, by, **6**: 61
- Electrons, attachment of, to form ions, **6**: 116
- Electrons, motion of, in, **6**: 116
- Electrons, secondary emission of, **6**: 63
- Electrons, thermal emission, effect on, **6**: 55
- Emission spectra, **5**: 305
- Entropy, **5**: 88
- Free energy
In water, **7**: 238
Reaction with hydrogen, **7**: 239
Reaction with oxygen, **7**: 238
- Glass, permeability of, **5**: 76
- Heat content, **5**: 88
- Heat of adsorption on charcoal, **5**: 139, 141
- Heat of dissociation, **5**: 418
- Heat of fusion, **1**: 104; **5**: 131
- Heat of vaporization, **1**: 102; **5**: 135
- Ion pairs produced by electrons, **6**: 121
- Ionization, atomic, **6**: 122
- Ionization by accelerated electrons, **6**: 121
- Ionization by α -particles, **6**: 122
- Ionization by electrons, **6**: 120
- Ions, diffusivity of, in, **6**: 115
- Ions, mobility of, in, **6**: 111, 114
- Isotopes, **1**: 47
- J*-Phenomenon, **6**: 1
- Joule-Thomson effect, **5**: 144
- Light, transmission of, by, **5**: 265
- Magnetic susceptibility, **6**: 354, 355
- Melting point, **1**: 104
- Molecular data, **1**: 92
- Orthobaric density, **3**: 204
- Persistent lines, **5**: 323
- Polarization of light scattered by, **5**: 265
- Quantum numbers, **5**: 408
- Refractive index
Gas, **7**: 7
Liquid, **1**: 103; **7**: 11
- Rubber, permeability of, **2**: 272; **5**: 76
- Solubility in
Aluminum, molten, **3**: 270
Aqueous solutions, **3**: 275
Copper, molten, **3**: 270
Iron, molten, **3**: 270
Non-aqueous liquids, **3**: 262
Sea water, **3**: 272
Water, **3**: 256
- Sound, velocity of, in, **6**: 462, 463
- Specific heat
Gas, **1**: 102; **5**: 80, 82, 85; **7**: 238
Liquid, **1**: 103; **5**: 85, 88
Solid, **1**: 104; **5**: 85, 88
- Spectral series, **5**: 401
- Steel, permeability of, **5**: 76
- Surface tension, **1**: 103; **4**: 441, 442
- Thermal conductivity, **5**: 213, 214
Molecular, **5**: 215
- Thermal expansion
Gas, **3**: 19
Liquid, **1**: 102; **3**: 20
- Thermochemistry, **5**: 178
- Thermodynamic potential, **5**: 88
- Transition temperature, **4**: 6
- Transmission of radiant energy, **5**: 269
- Triple point, **3**: 203
- Vapor pressure, **3**: 203, 204
- Verdet constant
Gas, **6**: 425
Liquid, **6**: 426
Dispersion, **6**: 432
- Virial coefficients, **3**: 19

Nitrogen.—(Continued)

- Viscosity
Gas, **1**: 102; **5**: 2
- X-ray diffraction bands, **1**: 351
- X-rays, absorption coefficient, **6**: 13, 15
- X-rays, absorption of, relation of ejected electrons, **6**: 20
- Zeeman effect, **5**: 420
- Argon*
- Argon*-Oxygen
- Carbon monoxide*
- Hydrogen*
- Iron*
- Oxygen
Boiling point, **3**: 309
Diffusion coefficient, **5**: 62
Heat of vaporization, **5**: 135
P-V-T relations, **3**: 17
Vapor pressure, **3**: 351, 381
Viscosity, **5**: 5
- Nitrogen dioxide**
Formation, kinetics of, **7**: 117
Refractive index, **7**: 8
See also Nitrogen tetroxide.
- Nitrogen hydride**, band spectra, **5**: 415
- Nitrogen oxides**, toxicology, **2**: 320
- Nitrogen pentoxide**
Decomposition, kinetics of, **7**: 116
Heat of formation, **5**: 178
Heat of fusion, **5**: 131
Magnetic susceptibility, **6**: 356
Specific heat, **5**: 95
Vapor pressure, **3**: 207
- Nitrogen selenide**, heat of formation, **5**: 179
- Nitrogen sulfide**
Heat of formation, **5**: 179
-Benzene*
- Carbon tetrachloride*
- Nitrogen tetroxide**
Boiling point, **3**: 229, 329
Critical point data, **3**: 229, 248
Density, liquid, **3**: 23
Dielectric constant
Gas, **6**: 75
Liquid, **6**: 76
Solid, **6**: 76
Dissociation constant (in chloroform), **7**: 241
Free energy, **7**: 241
Formation, **7**: 239
Reaction with water, **7**: 239
Heat content, **7**: 239
Heat of formation, **5**: 178; **7**: 239, 241
Heat of fusion, **5**: 131
Heat of vaporization, **5**: 136
Magnetic susceptibility, **6**: 356
Refractivity, **7**: 8
Solubility in non-aqueous liquids, **3**: 264
Specific heat, **5**: 81; **7**: 239, 241
Surface tension, **4**: 447
Thermal conductivity, **5**: 214
Vapor pressure
Liquid, **3**: 213
Solid, **3**: 207
Vapor pressure above 1 atm., **3**: 229
Viscosity, **7**: 212
- Acetic acid*
- Acetophenone*
- Benzoic acid*
- Benzyl chloride*
- Camphor*
- Carbon tetrachloride*
- m*-Dinitrobenzene*
- 2, 4-Dinitrophenol*
- Ethylene bromide*
- Nitric acid*
- Nitric oxide*
- Nitrobenzene*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Nitrogen tetroxide.—(Continued)

- Nitrogen trioxide
 - Density, **3**: 133
 - Freezing point-solubility, **4**: 44
 - Vapor pressure, **3**: 355
- o-Nitrotoluene
 - Freezing point-solubility, **4**: 189
- p-Nitrotoluene
 - Boiling point elevation, **3**: 329
- Picric acid
 - Boiling point elevation, **3**: 329
- Quinone
 - Boiling point elevation, **3**: 329
- 1, 1, 2, 2-Tetrabromoethane
 - Boiling point elevation, **3**: 329
- Toluene
 - Boiling point elevation, **3**: 329
- Toluic acid
 - Boiling point elevation, **3**: 329
- Tribromoacetic acid
 - Boiling point elevation, **3**: 329
- Trichlorobutyric acid
 - Boiling point elevation, **3**: 329

Nitrogen trichloride

- Heat of formation, **5**: 179
- Photochemical decomposition, **7**: 168

Nitrogen trioxide

- Density, liquid, **3**: 23
- Magnetic susceptibility, **6**: 356
- Solubility in water, **3**: 259
- Vapor pressure, **3**: 213
- Chloroform*
- Nitrogen tetroxide*
- Sulfuric acid
 - Density, aqueous solution, **3**: 96

Nitroglauherite

- Refractive index, **1**: 151, 169

Nitroglycerol

- Absorption spectra, **5**: 336
- Cryoscopic constant, **4**: 183
- Explosive, properties as, **7**: 490
- Heat of explosion, **7**: 490
- Vapor pressure, **3**: 218
- Acetone*

Nitroglycerol powders, **7**: 496**Nitroguanidine**

- Absorption spectra, **5**: 335
- Nitric acid*
- Sulfuric acid
 - Freezing point-solubility in water, **4**: 398

d-5-Nitrohydrindene-2-carboxylic acid

- l-5-Nitrohydrindene-2-carboxylic acid
 - Freezing point-solubility, **4**: 158

Nitrohydroquinol

- Camphor*

Nitromagnesite

- Refractive index, **1**: 141, 169

Nitromethane

- Absorption spectra, **5**: 331, 335
- Azeotropic mixtures, **3**: 319
- Birefringence, **7**: 110
- Boiling point, **3**: 216, 333
- Compressibility, **3**: 35
- Density, **3**: 28
- Dielectric constant, **6**: 82, 83
- Diffusion in methyl alcohol, **5**: 72
- Electrical conductivity, **6**: 143
 - Aqueous solution, **6**: 261
- Heat of combustion, **5**: 167
- Heat of solution in water, **5**: 148
- Heat of vaporization, **5**: 136
- Refractive index, **7**: 34
- Solubility in water, **3**: 387
 - Pressure, effect of, **3**: 393
- Solubility of salts in, **4**: 206
- Sound, velocity of, in, **6**: 464
- Specific heat, **5**: 107
- Surface tension, **4**: 436, 448
- Vapor pressure, **3**: 216
- Viscosity, **7**: 213

Nitromethane.—(Continued)

- Acetamide*
- Benzil*
- Benzyl cyanide*
- m-Dinitrobenzene*
- Diphenylamine*
- Ethyl alcohol*
- Ethyl iodide*
- Iodine*-Potassium iodide
- Potassium iodide
 - Density, **3**: 142
- Tetraethylammonium iodide
 - Boiling point elevation, **3**: 333
 - Density, **3**: 150
- Tetramethylammonium iodide
 - Density, **3**: 150
- Tetrapropylammonium iodide
 - Density, **3**: 150
- Triphenylmethane
 - Boiling point elevation, **3**: 333
- p-Nitromethylaniline
 - Heat of combustion, **5**: 168
 - Surface tension, **4**: 456
- α-Nitronaphthalene
 - Absorption spectra, **5**: 333, 345
 - Cryoscopic constant, **4**: 184
 - Diffusion in benzene, **5**: 74
 - Diffusion in methyl alcohol, **5**: 73
 - Heat of fusion, **5**: 134
 - Magnetic susceptibility, **6**: 363
 - Specific heat
 - Liquid, **5**: 112
 - Solid, **5**: 104
 - Verdet constant, **6**: 430
- Acetone*
- Amyl acetate*
- Aniline*
- Antimony tribromide*
- Antimony trichloride*
- Benzene*
- Camphor*
- Carbon disulfide*
- Catechol*
- Catechol*-Hydroquinol
- Catechol*-Resorcinol
- Chloroform*
- Diethyl tartrate*
- 1, 5-Dinitronaphthalene*
- 1, 5-Dinitronaphthalene*-1, 8-Dinitronaphthalene
- 1, 8-Dinitronaphthalene*
- Diphenylamine*
- Ethyl ether*
- Hydroquinol*
- Naphthalene*
- α-Naphthylamine*
- Paraffin
 - Solubility, mutual, **3**: 397
- Picric acid
 - Freezing point-solubility, **4**: 120
- Resorcinol
 - Freezing point-solubility, **4**: 139
- Styphnic acid
 - Freezing point-solubility, **4**: 122
- Urethan
 - Freezing point-solubility, **4**: 112
- Nitropentamine cobaltic chromate
 - Solubility in aqueous solutions, **7**: 336
- Nitropentamine cobaltic dinitrate
 - Solubility in aqueous solutions, **7**: 330
- Nitropentamine cobaltic oxalate
 - Solubility in aqueous solutions, **7**: 331
- Nitropentamine cobaltic tetranitrodiammine cobaltate
 - Solubility in aqueous solutions, **7**: 334
- Nitropentamine cobaltic tetrathiocyanatodiammine chromate
 - Solubility in aqueous solutions, **7**: 337
- Nitropentane
 - Iodine*-Potassium iodide

o-Nitrophenetole

- Diethyl tartrate*

p-Nitrophenetole

- Surface tension, **4**: 457

Nitrophenetole (o-, m-, p-)

- Absorption spectra, **5**: 343
- Heat of combustion, **5**: 168

Nitrophenol

- Diffusion in methyl alcohol, **5**: 73
- Vapor pressure, **3**: 221

o-Nitrophenol

- Absorption spectra, **5**: 339
- Cryoscopic constant, **4**: 183
- Electrical conductivity, aqueous solution, **6**: 272
- Heat of combustion, **5**: 168
- Heat of fusion, **5**: 133
- Heat of solution in water, **5**: 149
- Melting point under pressure, **4**: 10
- Solubility in water, **3**: 389
- Surface tension, **4**: 454
- Viscosity, **5**: 41, 46; **7**: 217
- Acenaphthene*
- Acetamide*
- Acetone*
- Acetophenone*
- m-Aminophenol*
- Ammonia*
- Aniline*
- Anthracene*
- Antipyrine*
- Azobenzene*
- Benzamide*
- Benzene*
- Benzhydrol*
- Benzophenone*
- Bromobenzene*
- Camphor*
- Carbazole*
- Carbon dioxide*
- Chloroform*
- Cineole*
- Cinnamic acid*
- Diethyl tartrate*
- Dimethyl oxalate*
- Dimethylpyrone*
- 2, 4-Dinitrophenol*
- Diphenylamine*
- Ethyl alcohol*
- Ethyl ether*
- Ethylene bromide*
- Fenchone*
- m-Hydroxybenzaldehyde*
- Isoamyl acetate*
- Methyl alcohol*
- Naphthalene*
- Naphthylamine* (α-, β-)
- Nitrophenol (m-, p-)
 - Freezing point-solubility, **4**: 168, 177
- o-Nitrophenyl acetate
 - Freezing point-solubility, **4**: 129
- Phenylenediamine (o-, m-, p-)
 - Freezing point-solubility, **4**: 129
- Picric acid
 - Freezing point-solubility, **4**: 175
- Pyridine
 - Density, **3**: 169
 - Heat of solution, **5**: 153
 - Viscosity, **5**: 41
- Quinoline
 - Density, **3**: 178
 - Viscosity, **5**: 46
- Succinimide
 - Freezing point-solubility, **4**: 113
- Sulfuric acid
 - Freezing point-solubility, **4**: 188
- Toluene
 - Freezing point-solubility, **4**: 129

* Data for system will be found under this compound in Index. Full explanation on page vii.

o-Nitrophenol.—(Continued)

- p*-Toluidine
 - Density, **3**: 178
 - Freezing point-solubility, **4**: 177
 - Viscosity, **5**: 46
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 101
- Trimethylcarbinol
 - Freezing point-solubility, **4**: 115
- Triphenylcarbinol
 - Freezing point-solubility, **4**: 130
- Triphenylmethane
 - Freezing point-solubility, **4**: 130
- m-Nitrophenol**
 - Absorption spectra, **5**: 339
 - Cryoscopic constant, **4**: 183
 - Electrical conductivity, aqueous solution, **6**: 272
 - Heat of combustion, **5**: 168
 - Heat of solution in water, **5**: 149
 - Solubility in water, **3**: 389; **4**: 253
 - Surface tension, **4**: 454
 - Acenaphthene*
 - Acetamide*
 - Acetone*
 - Acetophenone*
 - m*-Aminophenol*
 - Aniline*
 - Anthracene*
 - Antipyrine*
 - Azobenzene*
 - Benzamide*
 - Benzene*
 - Benzhydrol*
 - Benzophenone*
 - Camphor*
 - Carbazole*
 - Cineole*
 - Cinnamic acid*
 - Dimethyl oxalate*
 - Diphenylamine*
 - Diphenylmethane*
 - Ethyl alcohol*
 - Ethyl ether*
 - Hydrogen chloride*
 - Isoamyl acetate*
 - Naphthylamine (α -, β -)*
 - o*-Nitrophenol*
 - p*-Nitrophenol
 - Freezing point-solubility, **4**: 177
 - Phenylenediamine (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 130
 - Picric acid
 - Freezing point-solubility, **4**: 175
 - Succinic acid
 - Freezing point-solubility, **4**: 114
 - Succinimide
 - Freezing point-solubility, **4**: 113
 - Sulfuric acid
 - Freezing point-solubility, **4**: 188
 - Toluene
 - Freezing point-solubility, **4**: 130
 - p*-Toluidine
 - Freezing point-solubility, **4**: 130
 - Trichloroacetic acid
 - Freezing point-solubility, **4**: 101
 - Trimethylcarbinol
 - Freezing point-solubility, **4**: 115
 - Triphenylcarbinol
 - Freezing point-solubility, **4**: 131
 - Triphenylmethane
 - Freezing point-solubility, **4**: 131
- p-Nitrophenol**
 - Absorption spectra, **5**: 339
 - Boiling point elevation in aqueous solution, **3**: 327
 - Cryoscopic constant, **4**: 183
 - Density, aqueous solution, **3**: 112
 - Electrical conductivity, aqueous solution, **6**: 272
 - Heat of combustion, **5**: 168

p-Nitrophenol.—(Continued)

- Heat of solution in water, **5**: 149
- Magnetic susceptibility, **6**: 362
- Melting point under pressure, **4**: 15
- Solubility in water, **3**: 389; **4**: 251–253
- Pressure, effect of, **3**: 393
- Surface tension, **4**: 454
- Thermal conductivity, **5**: 216
- Volume change on melting, **4**: 15
- Acenaphthene*
- Acetamide*
- Acetic acid*
- Acetone*
- Acetophenone*
- m*-Aminophenol*
- Aniline*
- Anthracene*
- Antipyrine*
- Azobenzene*
- Benzamide*
- Benzene*
- Benzhydrol*
- Benzophenone*
- Bromobenzene*
- Camphor*
- Carbazole*
- Cineole*
- Cinnamic acid*
- Dimethyl oxalate*
- Dimethylpyrone*
- Diphenylamine*
- Diphenylmethane*
- Ethyl alcohol*
- Ethyl ether*
- Ethylene bromide*
- Fenchone*
- Hydrogen chloride*
- m*-Hydroxybenzaldehyde*
- Isoamyl acetate*
- Naphthalene*
- Naphthylamine (α -, β -)*
- Nitrophenol (*o*-, *m*-)*
- Phenylenediamine (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 131
- Picric acid
 - Freezing point-solubility, **4**: 175
- Succinic acid
 - Freezing point-solubility, **4**: 114
- Succinimide
 - Freezing point-solubility, **4**: 113
- Sulfuric acid
 - Freezing point-solubility, **4**: 188
- Toluene
 - Freezing point-solubility, **4**: 131
- p*-Toluidine
 - Freezing point-solubility, **4**: 131
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 101
- Trimethylcarbinol
 - Freezing point-solubility, **4**: 115
- Triphenylcarbinol
 - Freezing point-solubility, **4**: 132
- Triphenylmethane
 - Freezing point-solubility, **4**: 132
- o-Nitrophenyl acetate**
 - o*-Nitrophenol*
- Nitrophenylarsonic acid** (*o*-, *m*-, *p*-)
 - Electrical conductivity, aqueous solution, **6**: 273
- o-Nitrophenylchloroform**
 - Nitrophenylchloroform (*m*-, *p*-)
 - Freezing point-solubility, **4**: 169
- m-Nitrophenylchloroform**
 - p*-Nitrophenylchloroform
 - Freezing point-solubility, **4**: 144
- p-Nitrophenylfluoroform**
 - Birefringence, magnetic, **7**: 111
 - Magnetic susceptibility, **6**: 362
- m-Nitrophenylhydroxylamine**
 - Heat of combustion, **5**: 168

Nitrophenylnitromethanes

- Methyl alcohol*
- Nitropiperonal**
 - Trichloroacetic acid
 - Freezing point-solubility, **4**: 103
- Nitropropane**
 - Heat of combustion, **5**: 167
 - Refractive index, **7**: 35
- p-Nitropropylaniline**
 - p*-Nitrosopropylaniline
 - Freezing point-solubility, **4**: 154
- Nitroresorcinol**
 - Camphor*
- 2-Nitroresorcinol**
 - Electrical conductivity, aqueous solution, **6**: 272
 - Surface tension, **4**: 454
- p-Nitrosoaniline**
 - p*-Nitroaniline*
- Nitrosobenzene**
 - Absorption spectra, **5**: 339
 - Magnetic susceptibility, **6**: 362
 - Aniline*
 - Nitrobenzene*
- Nitrosodiethylamine**
 - Density, **3**: 28
 - Magnetic susceptibility, **6**: 361
 - Refractive index, **7**: 36
 - Nitrodiethylaniline*
- Nitrosodimethylamine**
 - Dielectric constant, **6**: 85
 - Electrical conductivity, aqueous solution, **6**: 263
 - Refractive index, **7**: 34
- p-Nitrosodimethylaniline**
 - Absorption spectra, **5**: 333, 343
 - Refractive index, **7**: 12
 - Rubber vulcanization, use in, **2**: 283
 - Acetamide*
 - Acridine*
 - Aniline*
 - Benzamide*
 - Benzene*
 - Naphthylamine (α -, β -)*
 - Phenol
 - Freezing point-solubility, **4**: 136
 - Phenylenediamine (*o*-, *m*-, *p*-)
 - Freezing point-solubility, **4**: 143
 - Pyridine
 - Freezing point-solubility, **4**: 117
 - Toluidine (*o*-, *p*-)
 - Freezing point-solubility, **4**: 152
 - Quinoline
 - Freezing point-solubility, **4**: 154
 - m*-Xylidine
 - Freezing point-solubility, **4**: 154
- Nitrosomethylaniline**
 - Refractive index, **7**: 40
 - Benzene*
- Nitroso- β -naphthol**
 - Electrical conductivity, aqueous solution, **6**: 293
 - Acetic acid*
- Nitrosopiperidine**
 - Absorption spectra, **5**: 338
 - Magnetic susceptibility, **6**: 362
 - Refractive index, **7**: 37
 - Solubility in water, **3**: 388
- p-Nitrosopropylaniline**
 - p*-Nitropropylaniline*
- Nitrosotriacetoneamine**
 - Decomposition, kinetics of, **7**: 122
- Nitrosyl bromide**
 - Formation, kinetics of, **7**: 117
 - Heat of formation, **5**: 179
- Nitrosyl chloride**
 - Boiling point, **3**: 229
 - Density
 - Gas, **3**: 3
 - Liquid, **3**: 23

* Data for system will be found under this compound in Index. Full explanation on page vii.

Nitrosyl chloride.—(Continued)

- Free energy, **7**: 240
- Formation, **7**: 240
- Heat of formation, **5**: 179
- Orthobaric density, **3**: 229
- Photochemical decomposition, **7**: 164
- Quantum sensitivity, **7**: 168
- Surface tension, **4**: 441
- Vapor pressure
 - Liquid, **3**: 213
 - Solid, **3**: 207
- Vapor pressure above 1 atm., **3**: 229
- Viscosity, liquid, **7**: 212

-Chlorine*

Nitrotartaric acid, optical rotatory power, **7**: 384**Nitrotoluene**

- Absorption spectra, **5**: 341
- Azeotropic mixtures, **3**: 322
- Boiling point, **3**: 223
- Vapor pressure, **3**: 223

-Benzene*

o-Nitrotoluene

- Absorption spectra, **5**: 332
- Birefringence, **7**: 111
- Cryoscopic constant, **4**: 183
- Dielectric constant, **6**: 82, 92, 105
- Electrical conductivity, **6**: 144
- Heat of combustion, **5**: 168
- Magnetic susceptibility, **6**: 362
- Polarization of light scattered by, **5**: 267
- Refractive index, **7**: 40
- Solubility in water, **3**: 391
- Sound, velocity of, in, **6**: 464
- Surface tension, **4**: 437, 456
- Verdet constant, **6**: 429
- Aluminum bromide*
- Aluminum chloride*
- Antimony tribromide*
- Antimony trichloride*
- Carbon disulfide*
- Cesium iodide*-Iodine
- Diethyl tartrate*
- 2, 4-Dinitrotoluene*
- Ethyl alcohol*
- Iodine*-Potassium iodide
- Isobutyl diacetyl-d-tartrate*
- Nitrobenzene*
- Nitrogen tetroxide*
- Nitrotoluene (*m*-, *p*-)
 - Freezing point-solubility, **4**: 170, 179
- p*-Nitrotoluene-2, 4, 6-Trinitrotoluene
 - Freezing point-solubility, **4**: 170
- 2, 4, 6-Trinitrotoluene
 - Freezing point-solubility, **4**: 178
- Water
 - Vapor pressure, **3**: 291

m-Nitrotoluene

- Birefringence, **7**: 111
- Cryoscopic constant, **4**: 183
- Density, **3**: 29
- Dielectric constant, **6**: 92
- Electrical conductivity, **6**: 144
- Heat of combustion, **5**: 168
- Polarization of light scattered by, **5**: 267
- Surface tension, **4**: 437, 456
- Viscosity, **5**: 49
- Aluminum bromide*
- Aluminum chloride*
- Antimony tribromide*
- Antimony trichloride*
- Benzene*
- Cyclohexane*
- Diethyl diacetyltartrate*
- Diethyl tartrate*
- Ethyl alcohol*
- Hexane*
- Iodine*-Potassium iodide
- Iodine*-Sodium iodide
- Methylcyclohexane*
- o*-Nitrotoluene*

m-Nitrotoluene.—(Continued)

- p*-Nitrotoluene
 - Freezing point-solubility, **4**: 179
- Toluene
 - Density, **7**: 86
 - Refractive index, **7**: 86
 - Dispersion, **7**: 105
- p*-Nitrotoluene
 - Absorption spectra, **5**: 332
 - Birefringence, electric, **7**: 111
 - Cryoscopic constant, **4**: 183
 - Dielectric constant, **5**: 92
 - Heat of combustion, **5**: 168
 - Surface tension, **4**: 456
 - Verdet constant, **6**: 429
- Acetone*
- Aluminum bromide*
- Aluminum chloride*
- Aniline*
- Antimony tribromide*
- Antimony trichloride*
- Carbon disulfide*
- 2, 4-Dinitrotoluene*
- 2, 4, 6-Trinitrotoluene
- 2, 6-Dinitrotoluene*
- Diphenylamine*
- Diethyl tartrate*
- Ethyl alcohol*
- Mercuric iodide*
- Naphthalene*
- Nitrobenzene*
- Nitrogen tetroxide*
- Nitrotoluene (*o*-, *m*-)*
- o*-Nitrotoluene*-2, 4, 6-Trinitrotoluene
- Tetryl
 - Freezing point-solubility, **4**: 147
- 2, 4, 6-Trinitrotoluene
 - Freezing point-solubility, **4**: 178
- Urethan
 - Freezing point-solubility, **4**: 112
- Nitrous acid**
 - Absorption spectra, solutions, **5**: 327
 - Decomposition kinetics, **7**: 148
 - Heat of formation, **5**: 179
 - Ionization constant, **7**: 239
- Nitrous oxide**
 - Boiling point, **1**: 108, 162; **3**: 229
 - Critical point data, **3**: 229, 248
 - Decomposition, kinetics of, **7**: 117
 - Decomposition pressure of hydrate, **7**: 241
 - Density
 - Gas, **3**: 3
 - Liquid, **1**: 108; **3**: 23
 - Dielectric constant
 - Gas, **6**: 75
 - Liquid, **6**: 76
 - Diffusion in water, **5**: 64
 - Dispersion formula, **7**: 11
 - Electrical conductivity, aqueous solution, **6**: 260
 - Electrons, attachment of, to form ions, **6**: 117
 - Electrons, motion of, in, **6**: 116
 - Free energy
 - Aqueous solution, **7**: 239
 - Formation, **7**: 239
 - Ionization, **7**: 239
 - Solution, **7**: 241
 - Freezing point lowering of aqueous solution, **4**: 255
 - Heat of formation, **5**: 178
 - Heat of fusion, **5**: 131
 - Heat of vaporization, **5**: 136, 138
 - Ionization by α -particles, **6**: 122
 - Ionization by β -particles, **6**: 121
 - Ionization by γ -rays, **6**: 123
 - Ionization by phosphorus vapor, **6**: 124
 - Ionization by X-rays, **6**: 123
 - Ions, mobility of, in, **6**: 111
 - Ions, recombination of, in, **6**: 115

Nitrous oxide.—(Continued)

- Light, transmission of, by, **5**: 265
- Magnetic susceptibility, **6**: 356
- Melting point, **1**: 108
- Orthobaric density, **3**: 229
- Polarization of light scattered by, **5**: 265
- Refractive index
 - Gas, **7**: 8
 - Liquid, **1**: 108, 165
- Rubber, permeability of, **2**: 272
- Solubility in
 - Aqueous solution, **3**: 276
 - Colloidal solutions, **3**: 282
 - Non-aqueous liquids, **3**: 264
 - Water, **3**: 259
- Sound, velocity of, in, **6**: 462, 463
- Specific heat, gas, **5**: 80, 81
- Surface tension, **4**: 442, 447
- Thermal conductivity, **5**: 213, 215
- Thermal expansion, **3**: 16
- Vapor pressure
 - Liquid, **3**: 213
 - Solid, **3**: 207
- Vapor pressure above 1 atm., **3**: 229
- Verdet constant
 - Gas, **6**: 425
 - Liquid, **6**: 426
- Viscosity, gas, **5**: 3
- X-ray diffraction data, **1**: 341
- Carbon dioxide*
- Ethane*
- Hydrogen*
- Hydrogen chloride*
- Methyl ether*
- Nicotine*
- Nitrogen trioxide
 - Vapor pressure, **3**: 285
- Nitrourea**
 - Absorption spectra, **5**: 335
 - Electrical conductivity, aqueous solution, **6**: 261
- Nocerine**, refractive index, **7**: 25
- Node**, definition, **1**: 39
- Noheet** (alloy), **2**: 380; *cf.* 556
- Nonane**
 - Compressibility, **3**: 37
 - Density, **3**: 30, 34
 - Dielectric constant, **6**: 95
 - Electrical conductivity, **6**: 144
 - Specific heat, **5**: 112
 - Viscosity, **7**: 220
- Nonanedicarboxylic acid**
 - Heat of combustion, **5**: 166
- Nongran** (alloy), **2**: 381; *cf.* 565
- Nonoic acid**, density, **3**: 45
- Non-pareil** (alloy), **2**: 381; *cf.* 557
- β -Nonyl esters
 - Optical rotatory power, **7**: 361
- γ -Nonyl esters
 - Optical rotatory power, **7**: 361
- Nonylacetylene**
 - Surface tension, **4**: 461
 - Viscosity, **7**: 221
- Nonylene**, specific heat, **5**: 112
- Nonylic acid**
 - Esterification constant, **7**: 138
 - Verdet constant, **6**: 430
- Noon**, definition, **1**: 42
- Nopinol**, optical rotatory power, **7**: 420
- Nopinone**, optical rotatory power, **7**: 415
- Nordenskioeldine**, density, **1**: 145
- Norit**. See Charcoal.
- Normal cells**, low-voltage, **6**: 315
- Northrupite**
 - Density, **1**: 153
 - Refractive index, **1**: 153, 165
- Norway**, weights and measures, **1**: 10]
- Norway iron**
 - Demagnetization by torsion, **6**: 441
 - Electrical conductivity, **6**: 424
 - Magnetic properties, **6**: 376

* Data for system will be found under this compound in Index. Full explanation on page vii.

Noselite

- Density, **1**: 153
- Refractive index, **1**: 153, 165
- Novo steel**, **2**: 381; *cf.* 472
- Nürnberg gold**, **2**: 381
- Nutation**, constant of, **1**: 35

Oak wood

- Density, **2**: 313, 314
- Thermal conductivity, **2**: 313, 314

Observations, errors of, **1**: 92**Oceanic deposits, radioactivity**, **1**: 379**Oceans, mean depth**, **1**: 394**Octadecane**

- Absorption spectra, **5**: 334
- Density, **3**: 30, 34

Octahedrite, thermal conductivity, **5**: 232**Octahydronaphthalene**

- Heat of combustion, **5**: 164

Octane

- Absorption spectra, **5**: 333, 344
- Azeotropic mixtures, **3**: 321
- Birefringence, electric, **7**: 111
- Boiling point, **3**: 225
- Compressibility, **3**: 37
- Critical point data, **3**: 245, 249
- Density, **3**: 29
- Dielectric constant, **6**: 94
- Dielectric strength, **6**: 106
- Diffusion of vapor in air, **5**: 63
- Flash point, **2**: 161
- Heat of combustion, **5**: 163
- Heat of vaporization, **5**: 137
- Ignition temperature, **2**: 174
- Inflammability, limits of, **2**: 179
- Internal pressure, **4**: 19
- Magnetic susceptibility, **6**: 363
- Orthobaric density, **3**: 245
- Polarization of light reflected from, **5**: 261
- Polarization of light scattered by
 - Gas, **5**: 266
 - Liquid, **5**: 267
- Refractive index, **7**: 45
- Specific heat, **5**: 112
- Surface tension, **4**: 437, 458
- Thermal conductivity, **5**: 228
- Vapor pressure, **3**: 225
- Vapor pressure above 1 atm., **3**: 245
- Verdet constant, dispersion of, **6**: 434
- Viscosity, **7**: 220, 223
- X-ray diffraction bands, **1**: 352
- X-rays, absorption coefficient, **6**: 14, 16
- X-rays, scattering of, **6**: 17
- Aniline**
- Benzene**
- Chloroform**
- Hexane**
- Phenol*
 - Solubility, mutual, **3**: 397
- Sulfur dioxide*
 - Solubility, mutual, **3**: 394

 β -Octanol

- Benzene**

 β -Octanol acetate

- Viscosity, **7**: 221
- Benzene**
- Carbon disulfide**

Octanonoxime

- Magnetic susceptibility, **6**: 363

Octoic acid

- Density, **3**: 45
- Refractive index, **7**: 45

Octyl acetate

- Verdet constant, **6**: 430

Octyl alcohol

- Absorption spectra, **5**: 333, 344
- Birefringence, electric, **7**: 111
- Critical temperature, **3**: 249
- Dielectric constant, **6**: 94
- Heat of combustion, **5**: 164

Octyl alcohol.—(Continued)

- Heat of vaporization, **5**: 137
- Magnetic susceptibility, **6**: 363
- Refractive index, **7**: 45
- Surface tension, **4**: 437, 459
- Aqueous solutions, **4**: 470
- Verdet constant, dispersion of, **6**: 434
- Viscosity, **7**: 220
- X-rays, absorption coefficient, **6**: 14, 16

sec.-Octyl alcohol

- Absorption spectra, **5**: 333
- Azeotropic mixtures, **3**: 322–323
- Critical temperature, **3**: 249
- Heat of vaporization, **5**: 137
- Verdet constant, dispersion of, **6**: 434
- Viscosity, **7**: 220

-Diethylamine***Octyl benzoate**

- Verdet constant, **6**: 430

Octyl chloride

- Magnetic susceptibility, **6**: 363
- Verdet constant, **6**: 430

sec.-Octyl chloride

- Verdet constant, **6**: 430

 β -Octyl esters

- Optical rotatory power, **7**: 361
- Viscosity, **7**: 221, 222

Octyl hydrogen phthalate

- Benzene**

sec.-Octyl hydrogen phthalate

- Benzene**

Octyl iodide

- Dielectric constant, **6**: 94
- Verdet constant, **6**: 430

sec.-Octyl iodide, dielectric constant, **6**: 94**Octylene**

- Birefringence, electric, **7**: 111
- Dielectric constant, **6**: 94
- Magnetic susceptibility, **6**: 363
- Refractive index, **7**: 45
- Specific heat, **5**: 112
- Surface tension, **4**: 458
- Verdet constant, **6**: 430

Octylene bromide, magnetic susceptibility, **6**: 363**Octylisopropyl carbinol, viscosity**, **7**: 221**Octylmalonic acid**

- Electrical conductivity, aqueous solution, **6**: 299
- Heat of combustion, **5**: 166

Odiophore, **1**: 358**Odoriferous materials**, **1**: 358**Odorimetry**, **1**: 360**Odors**

- Adsorption by metallic surfaces, **1**: 359
- Classification, **1**: 358
- Diffusion in free air, **1**: 358
- Threshold values, **1**: 360
- Ultra-violet light, destruction by, **1**: 359
- Volatility from paraffin solutions, **1**: 358

Oenanthaldoxime, surface tension, **4**: 457**Oenanthylidene chloride, magnetic susceptibility**, **6**: 362**Ohm**

- Definition, **1**: 39
- International, **1**: 18
- Legal, definition, **1**: 38

Oils

- Congelation temperature, **2**: 214
- Specific heat, **2**: 210

Oils, animal, **2**: 196

- Acetyl value, **2**: 214
- Common names, **2**: 198
- Composition, **2**: 207
- Density, **2**: 214
- Dispersion, optical, **2**: 214
- Fatty acids of, melting points, **2**: 215
- Heat of combustion, **2**: 211
- Hegner value, **2**: 215
- Iodine value, **2**: 214
- Paint and varnish industry, **2**: 318

Oils, animal.—(Continued)

- Properties, **2**: 203
- Refractive index, **2**: 213
- Reichert-Meissl value, **2**: 215
- Saponification value, **2**: 214
- Thermal expansion, **2**: 210
- Unsaponifiable matter, **2**: 215
- Oils, fuel**, **2**: 137, 162
- Oils, hydrogenated, properties**, **2**: 216
- Oils, insulating**
 - Dielectric strength, **2**: 305
 - Physical properties, **2**: 305
- Oils, mineral**, **2**: 136, 162
 - Corona in, **6**: 108
 - Thermal conductivity, **2**: 151; **5**: 228
- Oils, tar**, **2**: 170
- Oils, transformer**
 - Dielectric strength, **2**: 305, 306
 - Sparkover voltage, **2**: 306
- Oils, vegetable**, **2**: 196
 - Acetyl value, **2**: 214
 - Composition, **2**: 206
 - Density, **2**: 214
 - Dispersion, optical, **2**: 213
 - Electrical conductivity, **2**: 211
 - Fatty acids of, melting points, **2**: 215
 - Flash point, **2**: 211
 - Heat of combustion, **2**: 210
 - Hegner value, **2**: 215
 - Iodine value, **2**: 214
 - Optical rotation, **2**: 214
 - Paint and varnish industry, **2**: 317
 - Properties, **2**: 201
 - Refractive index, **2**: 212
 - Reichert-Meissl value, **2**: 215
 - Saponification value, **2**: 214
 - Thermal conductivity, **5**: 228
 - Thermal expansion, **2**: 210
 - Unsaponifiable matter, **2**: 215
 - Viscosity, **2**: 209

Okenite

- Dehydration behavior, **7**: 313
- Density, **1**: 144
- Refractive index, **1**: 144, 169

Oker (alloy), **2**: 381; *cf.* 469, 470, 556**Okra fiber, breaking strain**, **2**: 236**Oldhamite**

- Density, **1**: 143
- See also* Calcium sulfide.

Oleates

- Dielectric constant of solutions, **6**: 104
- Benzene**
- Capronitrile**
- Carbon disulfide**
- Carbon tetrachloride**
- Chloroform**
- Cottonseed oil**
- Kerosene**
- Nitrobenzene**
- Pyridine*
 - Dielectric constant, **6**: 104

Oleic acid

- Absorption spectra, **5**: 334
- Birefringence, magnetic, **7**: 112
- Dielectric constant, **6**: 96
- Electrical conductivity, **6**: 146
- Esterification constant, **7**: 138
- Heat of combustion, **5**: 166
- Interfacial tension, **4**: 438
- Magnetic susceptibility, **6**: 364
- Polarization of light reflected from, **5**: 261
- Rubber softener, **2**: 278
- Surface tension, **4**: 437, 462
- Viscosity, **7**: 223
- Acetone**
- Carbon disulfide**
- Cholesterol**
- Ethyl alcohol**
- Ethyl ether**
- Isoamyl acetate**

Oleic acid.—(Continued)

-Isoamyl alcohol*

-Methyl alcohol*

-Palmitic acid

Freezing point-solubility, 4: 165

Refractive index, 7: 90

-Palmitic acid-Stearic acid

Freezing point-solubility, 4: 171

Refractive index, 7: 97

-Stearic acid

Freezing point-solubility, 4: 166

Refractive index, 7: 90

Oleum

Density, 3: 96

Vapor pressure, 3: 304

Olfactory, 1: 358, 360**Oligoclase, compressibility, 3: 50****Olive oil**

Absorption spectra, 5: 334

Angle of contact, 4: 434

Electrical conductivity, 2: 211; 6: 146

Polarization of light reflected from, 5: 261

Rubber softener, 2: 278

Thermal conductivity, 5: 228

Thermal expansion, 2: 210

Olivinite

Density, 1: 123

Refractive index, 1: 123, 173

Olivile hydrate

Optical rotatory power, 7: 463

Olivine

Compressibility, 3: 50

Refractive index, 7: 23, 25

X-ray diffraction data, 1: 344

Onion's alloy, 2: 381**Opal**

Compressibility, 3: 50

Density, 1: 112

Refractive index, 1: 112, 165

Opianic acid

Absorption spectra, 5: 346

Electrical conductivity, aqueous solution, 6: 295

Heat of combustion, 5: 166

Optical bronze, 2: 381; cf. 476**Optical rotatory power**

Crystals, 7: 353

Liquids, 7: 354

Petroleum products, 2: 153

Solutions, 7: 354

Sugars, 2: 353

Optical wire (alloy), 2: 381; cf. 480**Optoquinine**

Absorption spectra, ultra-violet, 5: 370

Oranium bronze, 2: 381; cf. 574, 575, 600, 601**Orbit of electrons, 1: 47****Orcinol**

Electrical conductivity, aqueous solution, 6: 281

Heat of solution in water, 5: 150

Ordnance powders, 7: 497**Orëide (alloy), 2: 381; cf. 555, 556****Organ pipes, 6: 456****Orientite**

Density, 1: 145

Refractive index, 1: 145, 173

Ormolu (alloy), 2: 381; cf. 476, 559, 563, 601**Orpiment**

Boiling point, 1: 110, 162

Density, 1: 110

Refractive index, 1: 110, 174

Transformation temperature, 1: 110

See also Arsenous sulfide.

Orthochromous acid

-Sodium hydroxide

Freezing point-solubility in water, 4: 378

Orthoclase

Compressibility, 3: 50

Decomposition temperature, 4: 85

Density, 1: 158

Electrical conductivity, 6: 155

Melting point, 1: 158

Refractive index, 1: 158, 169; 7: 28

Specific heat, 5: 101

Thermal conductivity, 5: 232

Orthophosphoric acid. See Phosphoric acid.**Orthophosphorous acid**

Boiling point elevation of aqueous solution, 3: 325

Density, aqueous solution, 3: 61

Electrical conductivity, aqueous solution, 6: 260

Heat of formation, 5: 180

Ionization constants, 7: 241

Refractive index, aqueous solution, 7: 66

-Ammonium hydroxide*

-Phosphoric acid

Freezing point-solubility, 4: 45

-Potassium hydroxide

Refractive index, aqueous solution, 7: 92

Orthosilicic acid, heat of formation, 5: 182**Orthotelluric acid**

Electrical conductivity, aqueous solution, 6: 242

Freezing point lowering of aqueous solution, 4: 261

Osmiridium (alloy), 2: 381**Osmium**

Boiling point, 1: 102

Color temperature, 5: 246

Density, 1: 104; 2: 456

Electrical conductivity, 1: 104

Emission spectra, 5: 309

Magnetic susceptibility, 6: 355

Melting point, 1: 104

Persistent lines, 5: 323

Quantum numbers, 5: 408

Specific heat, 1: 104; 5: 93

Spectral series, 5: 403

Thermal expansion, 1: 104; 2: 461

Thermionic work function, 6: 56

Thermochemistry, 5: 189

X-ray absorption limits, 6: 41

X-ray crystal structure, 1: 340

X-ray emission spectra, 6: 41

Zeeman effect, 5: 420

-Iridium*

Osmium alloys, list of, 2: 390**Osmium fluoride, vapor pressure, 3: 214****Osmium lamp, temperature, 5: 247****Osmium potassium cyanide**

Refractive index, 1: 156, 171

Osmium tetroxide

Boiling point, 1: 125, 163

Density, 1: 125

Aqueous solution, 3: 67

Electrical conductivity, 6: 142

Aqueous solution, 6: 260

Heat of formation, 5: 189

Heat of fusion, 5: 131

Melting point, 1: 125

Refractive index, 1: 125, 165

Solubility in water, 4: 224

Vapor pressure, 3: 208

-Potassium chlorate

Freezing point-solubility in water, 4: 315

Osmotic pressure, 4: 429

Gelatin solutions, 2: 227

Otto's speculum, 2: 381; cf. 559, 561**Ounce metal, 2: 381; cf. 561****Overvoltage, 6: 339**

Pressure, effect of, on, 6: 340

Temperature, effect of, 6: 340

Oxalic acid

Absorption spectra, 5: 335, 375

Boiling point elevation in aqueous solution, 3: 327

Crystallography, 1: 324

Decomposition, kinetics of, 7: 123

Decomposition pressure of hydrate, 7: 245

Density, 3: 45

Aqueous solution, 3: 111, 113

Diffusion in methyl alcohol, 5: 72

Diffusion in water, 5: 69

Electrical conductivity, aqueous solution, 6: 262

Freezing point lowering of aqueous solution, 4: 262

Heat of combustion, 5: 165

Heat of decomposition of hydrate, 7: 245

Heat of formation, 5: 181

Heat of solution in water, 5: 148

Photochemical reactions, 7: 165, 170

Refractive index, aqueous solution, 7: 67

Solubility in water, 4: 251, 253

Specific heat, 5: 102

Aqueous solution, 5: 124

Surface tension, aqueous solution, 4: 467

Thermal conductivity, 5: 216

Vapor pressure, 3: 208

Aqueous solution, 3: 364

Viscosity, aqueous solution, 5: 21

-Acetic acid*

-Ammonium oxalate*

-Amyl alcohol*

-Beryllium oxalate*

-Beryllium oxalate*-Beryllium oxide

-Boric acid*

-Calcium chloride*

-Ethyl alcohol*

-Ethyl ether*

-Formic acid*

-Hydrogen chloride*

-Lactic acid*

-Lanthanum oxalate*-Lanthanum sulfate-

Sulfuric acid

-Lanthanum oxalate*-Sulfuric acid

-Lanthanum sulfate*-Sulfuric acid

-Manganous oxalate*

-Methyl alcohol*

-Molybdenum trioxide*

-Nitric acid*

-Potassium hydroxide

Freezing point-solubility in water, 4: 401

-Potassium oxalate

Freezing point-solubility in water, 4: 374

-Propyl alcohol

Heat of solution, 5: 152

-Sulfuric acid

Density, aqueous solution, 3: 101

Freezing point-solubility in water, 4: 398

-Thorium oxalate

Freezing point-solubility in water, 4: 401; 7: 319

Oxalotetrammine cobaltic chloride

Solubility in aqueous solutions, 7: 330

Oxalotetrammine cobaltic dithionate

Solubility in aqueous solutions, 7: 333

Oxalotetrammine cobaltic hexathiocyanato chromiate

Solubility in aqueous solution, 7: 337

Oxalotetrammine cobaltic nitrate

Solubility in aqueous solutions, 7: 331

Oxalotetrammine cobaltic oxalodinitrodi-

amine cobaltiate

Solubility in aqueous solutions, 7: 333

Oxalotetrammine cobaltic perchlorate

Solubility in aqueous solutions, 7: 330

Oxalotetrammine cobaltic persulfate

Solubility in aqueous solutions, 7: 333

* Data for system will be found under this compound in Index. Full explanation on page vii.

Oxalotetrammine cobaltic tetranitrodiammine cobaltateSolubility in aqueous solutions, **7: 332****Oxalotetrammine cobaltic tetrathiocyanatodiammine chromiate**Solubility in aqueous solutions, **7: 337****Oxaluric acid**Absorption spectra, **5: 367**Electrical conductivity, aqueous solution, **6: 263****Oxalyl chloride, refractive index, 7: 34****Oxamic acid**Electrical conductivity, aqueous solution, **6: 262**Heat of combustion, **5: 167**Heat of solution in water, **5: 148****Oxamide**Heat of combustion, **5: 167**Magnetic susceptibility, **6: 361****Oxazine dyes, absorption spectra, 7: 197****Oxidation-reduction cells**Electromotive force of, **6: 333****Oxidation-reduction reactions, 7: 147****Oxonitine, optical rotatory power, 7: 477****Oxycanthine, optical rotatory power, 7: 475****Oxygen**Accommodation coefficient, **5: 53**Adsorption by platinum black, **3: 253**Band spectra, **5: 415**Boiling point, **1: 53, 102; 3: 203, 325**Compressibility, gas, **3: 8**Contact potential, **6: 57**Critical constants, **1: 102; 3: 204, 248**Critical potentials, **6: 71, 72****Density**Gas, **1: 102; 3: 3**Liquid, **1: 102; 3: 20**Solid, **1: 104; 3: 21****Dielectric constant**Gas, **6: 74, 79**Liquid, **6: 75**Diffusion in sodium chloride solution, **5: 64**Dispersion formulas, **7: 11**Dissociation, work of, **6: 72**Electrode potential against hydroxide ion, **7: 231**Electrons, absorption of, by, **6: 61**Electrons, attachment of, to form ions, **6: 117**Electrons, motion of, in, **6: 116**Electrons, thermal emission by tungsten, effect on, **6: 55**Electrons, thermal emission of, **6: 53**Emission spectra, **5: 308**Entropy, **5: 88****Free energy**In water, **7: 231**Ozone formation, **7: 231**Reaction with barium oxide, **7: 299**Reaction with carbon monoxide, **7: 243**Reaction with hydrogen, **7: 231**Reaction with magnesium chloride, **7: 291**Reaction with nitric oxide, **7: 239**Reaction with nitrogen, **7: 238**Reaction with sulfur dioxide, **7: 236**Heat content, **5: 88**Heat of adsorption on charcoal, **5: 140, 141**Heat of dissociation, **5: 418; 7: 231**Heat of fusion, **1: 104; 5: 131**Heat of transition, **5: 176**Heat of vaporization, **1: 102; 5: 135**Ion pairs produced by electrons, **6: 121**Ionization, atomic, **6: 122**Ionization by α -particles, **6: 122**Ionization by β -particles, **6: 121**Ionization by γ -rays, **6: 123****Oxygen.—(Continued)**Ionization by phosphorus vapor, **6: 124**Ionization by X-rays, **6: 123**Ions, diffusivity of, in, **6: 115**Ions, mobility of, in, **6: 111, 114**Ions, recombination of, in, **6: 115**Isotopes, **1: 47***J*-Phenomenon, **6: 1**Joule-Thomson effect, **5: 144**Light, transmission of, by, **5: 265**Magnetic moment, **6: 352**Magnetic susceptibility, **6: 354, 355**Melting point, **1: 104**Molecular data, **1: 92**Orthobaric density, **3: 204**Overvoltage, **6: 340**Ozone equilibrium, **7: 166, 167**Persistent lines, **5: 323**Polarization of light scattered by, **5: 265**Quantum numbers, **5: 408****Refractive index**Gas, **7: 7**Liquid, **1: 103; 7: 11**Rubber, permeability of, **2: 272; 5: 76**Silver, diffusion in, **5: 77**Silver, permeability of, **5: 76****Solubility in**Aqueous solutions, **3: 271**Iron, molten, **3: 270**Non-aqueous liquids, **3: 262**Sea water, **3: 272**Silver, molten, **3: 270**Water, **3: 257**Sound, velocity of, in, **6: 462, 463****Specific heat**Gas, **1: 102; 5: 80, 82, 85; 7: 231**Liquid, **1: 103; 5: 85, 88**Solid, **1: 104; 5: 85, 88**Spectral series, **5: 402**Surface tension, **1: 103; 4: 441, 442**Thermal conductivity, **5: 213, 214**Molecular, **5: 215****Thermal expansion**Gas, **3: 8**Liquid, **1: 102; 3: 20**Thermochemistry, **5: 176**Thermodynamic potential, **5: 88**Transmission of radiant energy, **5: 269**Transition temperature, **4: 6**Triple point, **3: 203**Vapor pressure, **3: 203, 204****Verdet constant**Gas, **6: 425**Dispersion, **6: 432**Liquid, **6: 426**Dispersion, **6: 432****Viscosity**Gas, **1: 102; 5: 2**Liquid, **7: 212**X-ray diffraction bands, **1: 351**X-ray emission spectra, **6: 36**X-rays, absorption coefficient, **6: 13, 15**X-rays, absorption of, relation of ejected electrons to, **6: 20**Zeeman effect, **5: 420****-Air*****-Antimony*-Copper****-Argon*****-Argon*-Nitrogen****-Arsenic*-Bismuth-Copper****-Arsenic*-Copper****-Arsenic*-Copper-Silver****-Carbon dioxide*****-Carbon monoxide*****-Chlorine*****-Copper*****-Copper*-Sulfur****-Ethane*****-Ethylene*****-Hydrogen*****-Hydrogen chloride*****Oxygen.—(Continued)****-Iron*****-Iron*-Silica****-Methane*****-Nitrogen*****-Ozone**Solubility, mutual, **3: 393****-Vanadium**Freezing point-solubility, **4: 23****Ozokerite**Dielectric constant, **2: 310**Dielectric strength, **2: 310**Electrical conductivity, **2: 310**Properties, **2: 169**Refractive index, **2: 153****Ozone**Boiling point, **1: 102; 3: 203**Contact potential, **6: 57**Critical constants, **1: 102****Density**Gas, **1: 102**Liquid, **1: 102; 3: 21**Free energy of formation, **7: 231**Heat of formation, **5: 176; 7: 231**Heat of vaporization, **1: 102**Melting point, **1: 104**Photochemical decomposition, **7: 164**Quantum sensitivity, **7: 167**Refractivity, **7: 8**Solubility in carbon tetrachloride, **3: 263**Solubility in sulfuric acid, **3: 272**Solubility in water, **3: 257**Specific heat, gas, **7: 231**Thermal expansion, liquid, **1: 103; 3: 21**Transmission of radiant energy, **5: 269**Vapor pressure, **3: 203****-Oxygen*****"P" alloy, 2: 381; cf. 533, 599****P-T-V-relations. See Phase equilibrium.****P-T-X relations, 3: 351****Pachnolite**Density, **1: 154**Refractive index, **1: 154, 168****Paints**Albedo, **5: 262**Emissivity, **5: 244**Raw materials, **2: 317****Paktong (alloy), 2: 381; cf. 480****Palaite**Density, **1: 127**Refractive index, **1: 127, 172****Palau (alloy), 2: 381****Palladium**Absorption, index of, **5: 250, 252**Boiling point, **1: 102**Compressibility, **3: 47, 48**Critical potentials, **6: 71****Density**Liquid, **1: 102; 2: 463**Solid, **1: 104; 2: 456**Elastic properties, **2: 588**Electrical conductivity, **1: 104; 6: 136, 137, 138**Low temperature, **6: 128, 133**Magnetic field, effect of, **6: 422**Electronic structure, normal and excited, **6: 71**Electrons, secondary emission of, **6: 63**Emission, spectral, **5: 242, 254**Emission spectra, **5: 310**Ettingshausen effect, **6: 419**Evaporation, rate of, **5: 54**Hall effect, **6: 416, 417**Hardness, **2: 588**Heat of fusion, **1: 104; 2: 458**Hydrogen, permeability to, **5: 76**Magnetic susceptibility, **6: 355**Melting point, **1: 53, 104**Nernst effect, **6: 420**Peltier coefficient, **6: 227**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Palladium.—(Continued)

- Persistent lines, **5**: 324
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 250, 252
- Righi-Leduc effect, **6**: 421
- Sound, velocity of, in, **6**: 465
- Specific heat, **1**: 104; **5**: 93
- Spectral series, **5**: 403
- Tensile strength, **2**: 588
- Thermal conductivity, **5**: 220, 221
- Thermal expansion, **1**: 104; **2**: 461
- Thermochemistry, **5**: 190
- Thermoelectric properties, **6**: 214, 225
- X-ray absorption limits, **6**: 38
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 38
- X-ray lines, relative intensities, **6**: 32
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption, discontinuity in, **6**: 12
- X-rays, absorption coefficient, **6**: 13, 15
- Zeeman effect, **5**: 420
- Antimony*
- Copper*
- Gold*
- Hydrogen*
- Lead*
- Nickel*
- Platinum
 - Electrical conductivity, **6**: 195
 - Peltier coefficient, **6**: 227
 - Thermoelectric properties, **6**: 221
- Silver
 - Density, **2**: 589
 - Electrical conductivity, **6**: 161
 - Equilibrium diagram, **2**: 422
 - Hardness, **2**: 585
 - Peltier coefficient, **6**: 227
 - Photoelectric current, **6**: 69
 - Specific volume, **2**: 589
 - Thermal conductivity, **5**: 222
 - Thermoelectric properties, **6**: 215
 - X-ray diffraction data, **1**: 349
- Palladium alloys**, list of, **2**: 390
- Palladium black**, hydrogen, absorption of, by, **3**: 253
- Palladium bromide**, heat of formation, **5**: 190
- Palladium chloride**
 - Ammine
 - Decomposition pressure, **7**: 274
 - Heat of decomposition, **7**: 274
 - Heat of formation, **5**: 190
 - Density, aqueous solution, **3**: 67
 - Heat of formation, **5**: 190
 - Bismuth chloride*
 - Ethyl ether*
- Palladium cyanide**, heat of formation, **5**: 190
- Palladium dihydroxide**, heat of formation, **5**: 190
- Palladium hydride**
 - Decomposition pressure, **7**: 274
 - Heat of decomposition, **7**: 274
 - Heat of formation, **5**: 190
- Palladium iodide**
 - Ammine
 - Decomposition pressure, **7**: 274
 - Heat of decomposition, **7**: 274
 - Heat of formation, **5**: 190
 - Heat of formation, **5**: 190
- Palladium monoxide**, heat of formation, **5**: 190
- Palladium tetrahydroxide**, heat of formation, **5**: 190
- Pallasite**, compressibility, **3**: 51
- Palm oil**, rubber softener, **2**: 278
- Palmitic acid**
 - Compressibility, **3**: 39
 - Cryoscopic constant, **4**: 184
 - Electrical conductivity, **6**: 146

Palmitic acid.—(Continued)

- Esterification constant, **7**: 138
- Heat of combustion, **5**: 166
- Heat of fusion, **5**: 134
- Melting point under pressure, **4**: 10
- Polarization of light reflected from, **5**: 261
- Rubber softener, **2**: 278
- Specific heat
 - Liquid, **5**: 113
 - Solid, **5**: 104
- "Surface vapor pressure," **4**: 476
- Viscosity, **7**: 222
- Acetone*
- Arachidic acid*
- Azobenzene*
- Benzene*
- Carbon tetrachloride*
- Cholesterol*
- Ethyl acetate*
- Ethyl acetoacetate*
- Ethyl alcohol*
- Ethyl ether*
- Hexane*
- Lauric acid*
- Lignoceric acid*
- Methyl alcohol*
- Myristic acid*
- Naphthalene*
- Oleic acid*
- Oleic acid*-Stearic acid
- Paraldehyde
 - Density, **3**: 186
- Phenanthrene
 - Density, **3**: 195
- Propyl butyrate
 - Density, **3**: 190
- Sodium palmitate
 - Freezing point-solubility, **4**: 213
- Stearic acid
 - Density, **3**: 195
 - Freezing point-solubility, **4**: 165
 - Refractive index, **7**: 90
- Stearic acid-Tripalmitin
 - Freezing point-solubility, **4**: 172
- Stearic acid-Tristearin
 - Freezing point-solubility, **4**: 172
- Tripalmitin
 - Freezing point-solubility, **4**: 181
- Tripalmitin-Tristearin
 - Freezing point-solubility, **4**: 172
- Tristearin
 - Freezing point-solubility, **4**: 165
- Palmitonitrile**
 - "Surface vapor pressure," **4**: 476
- Pandermite**
 - Density, **1**: 145
 - Refractive index, **1**: 145, 171
- Papaverine**
 - Absorption spectra, **5**: 354
 - Electrical conductivity, aqueous solution, **6**: 302
 - Heat of combustion, **5**: 168
- Paper**
 - Albedo, **5**: 262
 - Dimension changes with humidity, **2**: 322
 - Insulating properties, **2**: 308, 312
 - Moisture content at various humidities, **2**: 322
 - Reflectivity, **5**: 262
 - Sound, velocity of, in, **6**: 465
 - Thermal conductivity, **2**: 312
 - Varnished, dielectric strength, **2**: 310
 - X-radiation, scattered, distribution of, **6**: 19
 - X-ray diffraction data, **2**: 357
 - X-rays, scattering of, **6**: 17
 - See also Asbestos paper, Cement paper, Fish paper, Kraft paper, Manila paper, Paraffin paper.

Parabanic acid

- Absorption spectra, **5**: 367
- Electrical conductivity, aqueous solution, **6**: 263
- Heat of combustion, **5**: 167

Paraffin

- Bromine number, **2**: 154
- Compressibility, **2**: 146
- Density, **2**: 145, 311, 314
- Dielectric constant, **2**: 310
- Dielectric strength, **2**: 310
- Electrical conductivity, **2**: 310
- X-rays, effect of, **6**: 6
- Electrostriction, **6**: 207
- Emission, spectral, **5**: 257
- Gamma rays, absorption coefficient, **6**: 20
- Heat of fusion, **2**: 151
- Ignition temperature, **2**: 174
- Iodine number, **2**: 154
- Light absorption, coefficient of, **2**: 153
- Magnetic susceptibility, **6**: 364
- Melting point, **2**: 149
- Penetrativity, **2**: 146
- Photoelectric threshold, **6**: 68
- Refractive index, **2**: 153
- Solubility, **2**: 149
- Sound, velocity of, in, **6**: 466
- Surface tension, **2**: 146
- Thermal conductivity, **2**: 151, 311, 314; **5**: 217
- Thermal expansion, **2**: 311
- X-radiation, scattered, distribution of, **6**: 19
- X-rays, scattering, modification by, **6**: 17
- Nitronaphthalene*

Paraffin oil

- Absorption spectra, **2**: 153; **5**: 334
- Electrical conductivity, **6**: 146
- Emission, spectral, **5**: 257
- Solubility in water, **3**: 392
- See also Kerosene.

Paraffin paper, dielectric constant, **2**: 310**Paraffin waxes**, melting point, **2**: 148**Paraformaldehyde**

- Heat of combustion, **5**: 167

Paragonite

- Density, **1**: 153
- Refractive index, **1**: 153, 171
- Paraguay**, weights and measures, **1**: 10
- Parahopeite**
 - Refractive index, **1**: 119, 171
 - Transformation point, **1**: 119

Paralaurionite

- Decomposition point, **1**: 115
- Density, **1**: 115

Paraldehyde

- Absorption spectra, **5**: 332, 340, 365
- Azeotropic mixtures, **3**: 319, 321-322
- Birefringence, **7**: 111
- Compressibility, **3**: 36
- Critical temperature, **3**: 249
- Cryoscopic constant, **4**: 183
- Density, aqueous solution, **3**: 114
- Dielectric constant, **6**: 91
- Electrical conductivity, **6**: 144
- Aqueous solution, **6**: 276
- Heat of fusion, **5**: 133
- Magnetic susceptibility, **6**: 362
- Refractive index, **7**: 40
- Solubility in water, **3**: 390
- Sound, velocity of, in, **6**: 464
- Specific heat, **5**: 110
- Surface tension, **4**: 455
- Aqueous solution, **4**: 469
- X-ray diffraction bands, **1**: 352
- Verdet constant, **6**: 429
- Viscosity, **5**: 40, 43; **7**: 218
- X-rays, absorption coefficient, **6**: 14, 16
- Acetaldehyde*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Paraldehyde.—(Continued)

- Acetic acid*
- Acetic anhydride*
- Azobenzene*
- Benzene*
- Carbon disulfide*
- Chloroform*
- p*-Dibromobenzene*
- Diethyl tartrate*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl ether*
- Ethylene bromide*
- Isoamyl alcohol*
- Methyl acetate*
- Naphthalene*
- Nitrobenzene*
- Palmitic acid*
- Tetraethylammonium iodide
Density, **3**: 186
- Xylene
Freezing point-solubility, **4**: 178
- Parallax, definition, **1**: 39
- Paraluminite, refractive index, **1**: 137, 168
- Paramagnetism, theories, **6**: 350
- Paramelaconite
Density, **1**: 121
See also Cupric oxide.
- Pararosaniline, diffusion in methyl alcohol,
5: 73
- Parasepiolite, refractive index, **1**: 142, 169
- Paratacamite
Density, **1**: 122
Refractive index, **1**: 122, 165
- Paravauxite
Density, **1**: 137
Refractive index, **1**: 137, 170
- Paris metal. See Lutecin.
- Parisian alloy, **2**: 381
- Parisite
Density, **1**: 146
Refractive index, **1**: 146, 166; **7**: 25
Thermal conductivity, **5**: 232
- Parker's chrome alloy, **2**: 381
- Parowax. See Paraffin.
- Parr (alloy), **2**: 381
- Parsec, definition, **1**: 39
- Parson's manganese bronze, **2**: 381; cf. 556
- Parson's white brass, **2**: 381
- Partinium (alloy), **2**: 381
- Pascoite
Density, **1**: 145
Refractive index, **1**: 145, 173
- Pasteboard, thermal conductivity, **2**: 313
- Patent nickel, electrical conductivity, **6**:
169, 170
- Pattern alloy, **2**: 381; cf. 475, 536, 557
- Pauli-Sommerfeld theory, **6**: 352
- Pauli's theory (diamagnetism), **6**: 350
- Pearceite, photoconductivity, **6**: 66
- Pearlite, magnetic properties, **6**: 380
- Peat
Composition, **2**: 131, 134
Density, **2**: 313
Thermal conductivity, **2**: 313
- Peat tar pitch. See Pitches.
- Peat tars. See Tars.
- Pectolite
Density, **1**: 154
Refractive index, **1**: 154, 171
- Pelargonic acid
Birefringence, electric, **7**: 111
Heat of fusion, **5**: 134
Surface tension, aqueous solution, **4**: 470
Vapor pressure, **3**: 226
Viscosity, **7**: 220
- Peltier coefficient, **6**: 213, 227
Conversion factors, **1**: 29
- Peltier effect, transverse, **6**: 214
- Pen metal, **2**: 381; cf. 555, 586
- Penetrativity, definition, **2**: 146

- Penfieldite, refractive index, **1**: 115, 167
- Penninite
Dielectric constant, **6**: 99
Refractive index, **7**: 23
Thermal conductivity, **5**: 231
- Pentabromophenol, magnetic suscep-
tibility, **6**: 362
- Pentabromoresorcinol
-Benzene*
- Pentacalcium hexaluminate
Decomposition temperature, **4**: 84
Melting point, **1**: 145
Refractive index, **1**: 145, 165
-Calcium orthosilicate*
-Magnesium oxide*
- Pentachloroethane
Azeotropic mixtures, **3**: 319
Birefringence, electric, **7**: 110
Boiling point, **3**: 216
Dielectric constant, **6**: 84
Magnetic susceptibility, **6**: 361
Refractive index, **7**: 34
Vapor pressure, **3**: 216
Viscosity, **5**: 35; **7**: 213
-Acetone*
-Acetophenone*
-Benzene*
-Bromine*
-Ethyl acetate*
-Ethyl ether*
-Iodine*
-Methyl acetate*
-Phenetole
Density, **3**: 153
Viscosity, **5**: 35
-Phenol
Distribution coefficients in water, **3**:
428
-Phenyl ether
Density, **3**: 153
Viscosity, **5**: 36
-Sulfur
Freezing point-solubility, **4**: 35
-Trichloroethylene
Density, **3**: 152
Viscosity, **5**: 35
- Pentachlorohexanedione, magnetic sus-
ceptibility, **6**: 362
- Pentachloromonobromo- α -keto- γ -R-
pentene
-Hexachloro- α -keto- γ -R-pentene*
- Pentadecane
Compressibility, **3**: 37
Density, **3**: 30, 34
Specific heat, **5**: 113
Viscosity, **7**: 222
- Pentadecylene
Absorption spectra, **5**: 334
Specific heat, **5**: 113
- Pentadecylic acid
"Surface vapor pressure," **4**: 476
- Pentaerythritol
Crystallography, **1**: 325
Diffusion in water, **5**: 70
Electrical conductivity, aqueous solu-
tion, **6**: 271
Heat of combustion, **5**: 164
- Pentamethylbenzene
Heat of combustion, **5**: 164
Refractive index, **7**: 55
Surface tension, **4**: 460
- Pentamethylenediamine, viscosity, **7**: 217
- Pentamethylenediamine disulfide
Heat of combustion, **5**: 169
- α , β -Pentamethylenedicarboxylic acid
Electrical conductivity, aqueous solu-
tion, **6**: 282
Heat of combustion, **5**: 165
- Pentane
Absorption spectra, **5**: 332
Azeotropic mixtures, **3**: 319, 324

Pentane.—(Continued)

- Birefringence, electric, **7**: 111
- Boiling point, **3**: 220
- Bromine number, **2**: 154
- Compressibility, **3**: 36
- Critical point data, **3**: 244, 248
- Density, **3**: 29, 33
- Dielectric constant, **6**: 82, 89
- Dielectric strength, **6**: 106
- Electrical conductivity, **6**: 144
- Electrical ignition, **2**: 175
- Flame propagation in, **2**: 184
- Heat of combustion, **5**: 163
- Heat of wetting by, **5**: 142
- Ignition temperature, **2**: 174
- Inflammability, limits of, **2**: 179
- Iodine number, **2**: 154
- Ionization of vapor by α -particles, **6**: 122
- Ionization of vapor by β -particles, **6**: 121
- Ionization of vapor by γ -rays, **6**: 123
- Ions, mobility of, in, **6**: 112
- Orthobaric density, **3**: 244
- Polarization of light reflected from, **5**:
261
- Polarization of light scattered by
Gas, **5**: 266, 268
Liquid, **5**: 267, 268
- Refractive index
Gas, **7**: 10
Liquid, **7**: 38
- Solidification point, **1**: 61
- Sound, velocity of, in vapor, **6**: 463
- Specific heat, gas, **5**: 81
- Thermal conductivity
Gas, **5**: 214, 215
Liquid, **5**: 228
Pressure, effect of, **5**: 227
- Vapor pressure, **3**: 220
- Vapor pressure above 1 atm., **3**: 244
- Verdet constant, **6**: 429
- Viscosity, **7**: 216, 223
- Aniline*
- Butane*
- Chloroform*
- Ethyl ether*
- Heptane*
- Methyl alcohol*
- Pentane candle, **1**: 39
- Pentane lamp, **5**: 435
Temperature, **5**: 247
- Pentathionic acid, heat of formation, **5**: 178
- α , β -Pentenic acid
Heat of combustion, **5**: 165
Refractive index, **7**: 37
- β , γ -Pentenic acid
Heat of combustion, **5**: 165
Refractive index, **7**: 37
- Pentlandite
Emission, spectral, **5**: 258
X-ray diffraction data, **1**: 343
- Pepsin, **7**: 156
- Peptone
Compressibility, aqueous solution, **3**: 440
- Perchloric acid
Boiling point, maximum, **3**: 323
Density, **3**: 22
Aqueous solution, **3**: 54
Electrical conductivity, aqueous solu-
tion, **6**: 241, 242
Freezing point lowering of aqueous solu-
tion, **4**: 254
Heat of formation, **5**: 177
Solubility in water, **4**: 216, 245
Specific heat, aqueous solution, **5**: 122
Viscosity, aqueous solution, **5**: 12
-Arsenous oxide*
-Ethyl alcohol*-Potassium perchlorate
-Methyl alcohol*-Potassium perchlorate
-Potassium chlorate
Freezing point-solubility in water, **4**:
316; **7**: 345

* Data for system will be found under this compound in Index. Full explanation on page vii.

Perchloroethylene, refractive index, **7**: 34
Percit (alloy), **2**: 381
Percussion cap brass, **2**: 381; *cf.* 469, 555
Percy aluminum bronze, **2**: 381
Percylite
 Density, **1**: 123
 Refractive index, **1**: 123, 165
Periclase
 Density, **1**: 141
 Melting point, **1**: 141
 Refractive index, **1**: 141, 165
 Thermal expansion, **3**: 43
 See also Magnesium oxide.
Peridotite, compressibility, **3**: 51
Periodic acid
 Density, aqueous solution, **3**: 55
 Electrical conductivity, aqueous solution, **6**: 242
 Freezing point lowering of aqueous solution, **4**: 254
 Heat of formation, **5**: 177
 Refractive index, aqueous solution, **7**: 65
 *-Ammonium hydroxide**
 -Potassium hydroxide
 Refractive index, aqueous solution, **7**: 91
 -Sodium hydroxide
 Refractive index, aqueous solution, **7**: 91
Periodic chart, elements, **1**: 46
Perigee, **1**: 39
Perihelion, **1**: 40
Perlit cast iron, **2**: 381
Perlit nickel cast iron, **2**: 381
Permalloy, **2**: 381
 Magnetic properties, **6**: 374, 396-397
 Magnetization by rotation, **6**: 347
 Rotation by magnetization, **6**: 347
Permanganate ion
 Electrode potential, **7**: 274
Permanganic acid
 Density, aqueous solution, **3**: 67
 Heat of formation, **5**: 190
Permanite (alloy), **2**: 381
Permeability
 Definition, **1**: 40
 Magnetic, **6**: 366
 Solids to gases, **5**: 76
Permutite
 Electrical conductivity, **6**: 151
 Ions, diffusion of, in, **5**: 77
Perovskite
 Density, **1**: 144
 Refractive index, **1**: 144, 173
Perseitol, heat of combustion, **5**: 164
Persia, weights and measures, **1**: 10
Persulfuric acid
 Density, aqueous solution, **3**: 55
 Decomposition kinetics, **7**: 148
 Heat of formation, **5**: 178
 -Sulfuric acid
 Density, aqueous solution, **3**: 96
Peru, weights and measures, **1**: 10
Petalite
 Density, **1**: 150
 Melting point, **1**: 150
 Refractive index, **1**: 150, 169
 Specific heat, **5**: 100
Petrol. *See* Gasoline.
Petrolatum
 Bromine number, **2**: 154
 Density, **2**: 145
 Dielectric constant, **2**: 310
 Dielectric strength, **2**: 310
 Electrical conductivity, **2**: 310
 Heat of vaporization, **2**: 151
 Iodine number, **2**: 154
 Penetrativity, **2**: 146
 Refractive index, **2**: 153
 Thermal conductivity, **2**: 151
 Vapor pressure, **2**: 149
 Viscosity, **2**: 146

Petroleum
 Absorption spectra, **2**: 153; **5**: 334
 Burning point, **2**: 155
 California, properties of, **2**: 155
 Components, **2**: 155
 Composition, **2**: 137
 Compressibility, **2**: 146
 Density, **2**: 137, 144, 155, 156
 Electrical conductivity, **6**: 146
 Flash point, **2**: 155, 156
 Heat of combustion, **2**: 152
 Heat of vaporization, **2**: 151
 Ignition temperature, **2**: 174
 Inflammability, limits of, **2**: 179
 Magnetic susceptibility, **6**: 364
 Proximate composition, **2**: 139
 Refractive index, **2**: 153
 Rumanian, properties of, **2**: 155
 Sound, velocity of, in, **6**: 464
 Surface tension, **2**: 146
 Sulfur content, **2**: 155
 Thermal expansion, **2**: 145
 Viscosity, **2**: 155, 156
 Water content, **2**: 155
 *-Castor oil**
 *-Nitrobenzene**
 -Toluene
 Dielectric constant, **6**: 103
 -Turpentine
 Dielectric constant, **6**: 103
Petroleum ether
 Birefringence, magnetic, **7**: 112
 Density, **2**: 145
 Electrical conductivity, **6**: 146
 X-rays, effect of, **6**: 6
 Thermal conductivity, **5**: 228
 Pressure, effect of, **5**: 227
Petroleum lamp
 Luminous efficiency, **5**: 438
Petroleum products
 Bromine numbers, **2**: 154
 Gum test, **2**: 154
 Iodine numbers, **2**: 154
 Light absorption, coefficient of, **2**: 153
 Olefins, test for, **2**: 154
 Optical activity, **2**: 153
 Specific heat, **2**: 151
 Specifications, **2**: 160
 Terminology, **2**: 160
 Unsaturation, test for, **2**: 154
Petroleum tar pitches. *See* Pitches.
Petroleum tars. *See* Tars
Pewter, **2**: 381, 556, 557, 600, 602
pH. *See* Hydrogen ion concentration.
Phacolite, dehydration behavior, **7**: 313
Pharmacolite
 Density, **1**: 143
 Refractive index, **1**: 143, 171
Pharmacosiderite
 Density, **1**: 129
 Refractive index, **1**: 129, 172
Phase equilibrium data, **3**: 1; **4**: 1
 Metallic systems, **2**: 358
 Soaps, **5**: 451
Phellandrene
 Absorption spectra, **5**: 346
 Optical rotatory power, **7**: 410
Phenacetin
 Crystallography, **1**: 330
 Heat of combustion, **5**: 168
 Surface tension, aqueous solution, **4**: 470
 *-Acetic acid**
 *-Amyl acetate**
 *-Aniline**
 *-Benzaldehyde**
 *-Benzene**
 *-Ethyl alcohol**
 *-Isoamyl alcohol**
 -Toluene
 Density, **3**: 188

Phenacetin.—(Continued)
 -m-Xylene
 Density, **3**: 191
Phenacite
 Density, **1**: 141
 Refractive index, **1**: 141, 167; **7**: 23
 Thermal conductivity, **5**: 232
 Thermal expansion, **3**: 45
Phenanthraquinone
 Absorption spectra, **5**: 349
 Magnetic susceptibility, **6**: 363
 Solubility in salt solutions, **4**: 422
 *-Benzene**
 *-Ethyl acetate**
 *-Hydrogen chloride**
 *-Iodine**
 *-Nitric acid**
 *-Nitrobenzene**
 -Quinoline
 Boiling point elevation, **3**: 346
 -Sulfuric acid
 Freezing point-solubility in water, **4**: 398
Phenanthrene
 Absorption spectra, **5**: 350
 Boiling point, **3**: 227
 Cryoscopic constant, **4**: 184
 Dielectric constant, **6**: 96
 Heat of combustion, **5**: 164
 Heat of fusion, **5**: 134
 Magnetic susceptibility, **6**: 363
 Photoconductivity, **6**: 66
 Photoluminescence, **5**: 387
 Vapor pressure, **3**: 227
 Verdet constant, **6**: 431
 *-Acetic acid**
 *-Acetone**
 *-Acridine**
 *-Aniline**
 *-Anthracene**
 -Anthracene-Carbazole*
 *-Benzene**
 *-Camphene**
 *-Carbazole**
 *-Carbon disulfide**
 *-Carbon tetrachloride**
 *-Chlorobenzene**
 *-Chloroform**
 *-Chrysene**
 *-Dinitrobenzene (o-, m-, p-)**
 *-2, 4-Dinitrophenol**
 *-2, 4-Dinitrotoluene**
 *-2, 6-Dinitrotoluene**
 *-3, 4-Dinitrotoluene**
 *-Ethyl acetate**
 *-Ethyl acetoacetate**
 *-Ethyl alcohol**
 -Ethyl alcohol-Picric acid*
 *-Ethyl chloroacetate**
 *-Ethyl ether**
 *-Ethyl trichloroacetate**
 *-Ethylene bromide**
 *-Hexachloroethane**
 *-Isoamyl acetate**
 *-Methyl acetate**
 *-Methyl alcohol**
 *-Methyl benzoate**
 *-Methyl butyrate**
 *-Methyl formate**
 *-Methyl thiocyanate**
 *-Naphthalene**
 *-Nitrobenzene**
 *-Palmitic acid**
 -Phosphorus
 Solubility, mutual, **3**: 394
 -Picramide
 Freezing point-solubility, **4**: 127
 -Picric acid
 Freezing point-solubility, **4**: 121
 -Picryl chloride
 Freezing point-solubility, **4**: 117

Phenanthrene.—(Continued)

- Propyl butyrate
Density, **3**: 190
- Pyridine
Boiling point elevation, **3**: 342
Freezing point-solubility, **4**: 174
- Quinoline
Density, **7**: 88
Refractive index, **7**: 88
Dispersion, **7**: 107
- p-Quinone
Freezing point-solubility, **4**: 127
- Retene
Freezing point-solubility, **4**: 163
- Styphnic acid
Freezing point-solubility, **4**: 122
- Tetrachloroethane
Freezing point-solubility, **4**: 173
- Toluene
Boiling point elevation, **3**: 346
Density, **3**: 188
Dielectric constant, **6**: 103
Freezing point-solubility, **4**: 179
- 1, 3, 5-Trinitrobenzene
Freezing point-solubility, **4**: 119
- 2, 4, 6-Trinitrotoluene
Freezing point-solubility, **4**: 146
- Phenanthrene picrate**
-Ethyl alcohol*
-Ethyl alcohol*-Picric acid
- Pheneserine**, optical rotatory power, **7**: 476
- Phenetidine**
Absorption spectra, **5**: 344
Dielectric constant, **6**: 94
- Phenetole**
Absorption spectra, **5**: 343
Azeotropic mixtures, **3**: 322, 324
Birefringence, **7**: 111
Boiling point, **3**: 224, 346
Critical point data, **3**: 249
Density, **3**: 29, 34
Dielectric constant, **6**: 93
Diffusion in methyl alcohol, **5**: 73
Electrical conductivity, **6**: 144
Magnetic susceptibility, **6**: 363
Refractive index, **7**: 43
Specific heat, **5**: 112
Surface tension, **4**: 437, 458
Verdet constant, **6**: 429
Viscosity, **5**: 33, 34, 49, 51; **7**: 219
- Aniline*
- Anthracene*
- Antimony tribromide*
- Antimony trichloride*
- Benzoic acid*
- Benzyl cyanide*
- Chloroform*
- Diethyl tartrate*
- Diphenyl ether*
- Ethyl alcohol*
- Ethyl ether*
- Ethyl iodide*
- Isoamyl acetate*
- Methyl alcohol*
- Pentachloroethane*
- Phenyl ether
Density, **3**: 192
Viscosity, **5**: 51
- Sulfur
Boiling point elevation, **3**: 46
- Tetrachloroethane
Density, **3**: 154
Viscosity, **5**: 36
- Triphenylmethane
Boiling point elevation, **3**: 346
- Phenix (alloy)**, **2**: 381; cf. 471, 481
- Phenogeneserine**
Optical rotatory power, **7**: 476
- Phenol**
Absorption coefficient, **5**: 332, 339, 361, 362, 373, 375

Phenol.—(Continued)

- Adsorption by charcoal, **3**: 252
- Allotropic forms, **4**: 15
- Azeotropic mixtures, **3**: 319, 322-323
- Boiling point, **3**: 221, 345
- Boiling point elevation in aqueous solution, **3**: 327
- Compressibility difference, **4**: 15
- Critical point data, **3**: 249
- Cryoscopic constant, **4**: 183, 215
- Density, **3**: 29
Aqueous solution, **3**: 112, 114
- Dielectric constant, **6**: 90
- Diffusion in benzene, **5**: 74
- Diffusion in organic liquids, **5**: 75
- Diffusion in ethyl alcohol, **5**: 74
- Diffusion in methyl alcohol, **5**: 73
- Diffusion in water, **5**: 70
- Electrical conductivity, **6**: 144
Aqueous solution, **6**: 273
- Flash point, **2**: 161
- Freezing point lowering of aqueous solution, **4**: 263
- Heat of adiabatic expansion, **5**: 147
- Heat of combustion, **5**: 167
- Heat of fusion, **5**: 133
- Heat of solution in water, **5**: 149
- Magnetic susceptibility, **6**: 362
- Melting point under pressure, **4**: 15
- Osmotic pressure, **4**: 430
- Photoluminescence, **5**: 386
- Refractive index, **7**: 12, 38
Aqueous solution, **7**: 69
- Solubility in hydrochloric acid, **3**: 416
- Solubility in sodium chloride solution, **3**: 416
- Solubility in water, **3**: 389; **4**: 252
Pressure, effect of, **3**: 393
- Specific heat, **5**: 110
Aqueous solution, **5**: 125
- Sulfonation velocity, **7**: 147
- Surface tension, **4**: 454
Aqueous solution, **4**: 469
- Triple point, **4**: 15
- Vapor pressure, **3**: 221
Aqueous solution, **3**: 365, 383
- Verdet constant, **6**: 429
- Viscosity, **5**: 39, 42, 47; **7**: 217
Aqueous solution, **5**: 21
- Volume change on melting, **4**: 15
- Acetamide*
- Acetamide*-Ethyl alcohol
- Acetanilide*
- Acetic acid*
- Acetone*
- Acetophenone*
- Acridine*
- Alizarin*
- Aminophenol (m-, p-)*
- Ammonia*
- Amyl alcohol*
- Aniline*
- Antimony tribromide*
- Antimony trichloride*
- Antipyrine*
- Arsenous bromide*
- Barium hydroxide*
- Benzamide*
- Benzene*
- Benzhydrol*
- Benzil*
- Benzophenone*
- Bromoform*
- p-Bromotoluene*
- Calcium hydroxide*
- Camphor*
- Carbon disulfide*
- Carbon tetrachloride*
- Chloroacetic acid*
- Chlorobenzene*
- Chloroform*

Phenol.—(Continued)

- Cineole*
- Cinnamic acid*
- Cresol*
- Cresol (o-, m-, p-)*
- o-Cresol*-m-Cresol
- m-Cresol*-p-Cresol
- Cyclohexanone*
- Diethyl diacetyl tartrate*
- Diethyl tartrate*
- Dimethyl oxalate*
- Dimethylaniline*
- Dimethylpyrone*
- Dimethylurea*
- Diphenylamine*
- Diphenylmethane*
- Diphenylmethylethylamine*
- Ethyl alcohol*
- Ethyl ether*
- Ethylene bromide*
- Fenchone*
- Heptane*
- Hexane*
- Hydrogen chloride*
- Hydrogen peroxide*
- Hydroquinol*
- Hydroxybenzaldehyde (m-, p-)*
- Indigotin*
- Isoamyl acetate*
- Isopentane*
- Lithium hydroxide*
- Lophine*
- Mercuric acetate*
- Methylurea*
- Naphthalene*
- Naphthylamine (α-, β-)*
- m-Nitrobenzaldehyde*
- Nitrobenzene*
- Nitrosodimethylaniline*
- Octane*
- Pentachloroethane*
- Phenylenediamine (o-, m-, p-)
Freezing point-solubility, **4**: 135
- Phenylhydrazine
Density, **3**: 182
Freezing point-solubility, **4**: 135
Viscosity, **5**: 47
- Phthalic acid
Freezing point-solubility in water, **4**: 416
- Picric acid
Freezing point-solubility, **4**: 119
- Potassium hydroxide
Freezing point-solubility in water, **4**: 417
- Potassium iodide
Distribution coefficients in water, **3**: 422
- Pyridine
Density, **3**: 170
Freezing point-solubility, **4**: 116
Heat of solution, **5**: 153
Viscosity, **5**: 42
- Pyridine-Sulfuric acid
Freezing point-solubility in water, **4**: 424
- Pyrocatechol
Miscibility in water, **3**: 414
- Pyrogallol
Freezing point-solubility in water, **4**: 416
- Quinoline
Density, **3**: 183
Freezing point-solubility, **4**: 136
Viscosity, **5**: 48
- Resorcinol
Miscibility in water, **3**: 414
- Salicylic acid
Distribution coefficients in water, **3**: 430

* Data for system will be found under this compound in Index. Full explanation on page vii.

Phenol.—(Continued)

- Sodium chloride
 - Miscibility of, in water, **3**: 409, 416
- Sodium hydroxide
 - Freezing point-solubility in water, **4**: 417
 - Miscibility of, in water, **3**: 409
- Sodium oleate
 - Freezing point-solubility in water, **4**: 416
 - Miscibility in water, **3**: 414
- Sodium sulfate
 - Miscibility of, in water, **3**: 409
- Strontium hydroxide
 - Freezing point-solubility in water, **4**: 416
- Succinic acid
 - Freezing point-solubility, **4**: 114
- Succinimide
 - Freezing point-solubility, **4**: 113
- Sulfur
 - Boiling point-elevation, **3**: 345
- Sulfuric acid
 - Freezing point-solubility, **4**: 188
 - Miscibility of, **3**: 409
- Tetrachloroethane
 - Distribution coefficients in water, **3**: 428
- Tetrachloroethylene
 - Distribution coefficients in water, **3**: 428
- Thymol
 - Freezing point-solubility, **4**: 137
- Toluene
 - Density, **3**: 182
 - Distribution coefficients in water, **3**: 428
- o-Toluidine
 - Freezing point-solubility, **4**: 136
- p-Toluidine
 - Density, **3**: 182
 - Freezing point-solubility, **4**: 136
 - Viscosity, **5**: 47
- Tribenzylamine
 - Boiling point elevation, **3**: 345
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 102
- Trichloroethylene
 - Distribution coefficients in water, **3**: 428
- Triethylamine
 - Miscibility in water, **3**: 415
- Trimethylcarbinol
 - Density, **3**: 168
 - Freezing point-solubility, **4**: 115
- Triphenylcarbinol
 - Freezing point-solubility, **4**: 137
- Triphenylmethane
 - Boiling point elevation, **3**: 345
 - Freezing point-solubility, **4**: 137
- Urea
 - Freezing point-solubility, **4**: 100
- Urethan
 - Freezing point-solubility, **4**: 112
- Water
 - Miscibility of, **3**: 409, 416
 - Vapor pressure, **3**: 291
- m-Xylene
 - Dielectric constant, **6**: 103
 - Distribution coefficients in water, **3**: 428
- p-Xylene
 - Freezing point-solubility, **4**: 136
- m-Xylidine
 - Freezing point-solubility, **4**: 136

Phenol resins

- Dielectric constant, **2**: 300
- Dielectric strength, **2**: 300
- Electrical conductivity, **2**: 300
- Physical and chemical agents, effects of, **2**: 300

Phenol resins.—(Continued)

- Physical properties, **2**: 298
 - Power factor, **2**: 300
 - Tensile strength, **2**: 300
- Phenolphthalein**
- Absorption spectra, **5**: 354
 - Diffusion in methyl alcohol, **5**: 73
 - Photoluminescence, **5**: 387
- Benzene*
- Sodium hydroxide
- Freezing point-solubility in water, **4**: 377, 393
- Sodium oxide
- Freezing point-solubility in water, **4**: 422
- Phenolsulfonic acid**
- Electrical conductivity, aqueous solution, **6**: 273
 - Heat of solution in water, **5**: 149
- Phenoxyacetic acid**
- Absorption spectra, **5**: 343
 - Electrical conductivity, aqueous solution, **6**: 286
 - Heat of combustion, **5**: 165
- Ethylene bromide*
- Phenyl acetate**
- Absorption spectra, **5**: 333, 343
 - Azeotropic mixtures, **3**: 323
 - Dielectric constant, **6**: 93
 - Diffusion in methyl alcohol, **5**: 73
 - Verdet constant, **6**: 429
 - Viscosity, **7**: 219
- Isoamyl acetate*
- Phenyl acetylsalicylate**
- Carbon disulfide*
- Phenyl allyl ether**
- Verdet constant, **6**: 430
- Phenyl anisyl ketone**
- Trichloroacetic acid
- Freezing point-solubility, **4**: 104
- Phenyl benzoate**
- Absorption spectra, **5**: 349
 - Cryoscopic constant, **4**: 184
 - Verdet constant, **6**: 430
- Benzene*
- Carbon disulfide*
- Carbon tetrachloride*
- Cyclohexane*
- Ethyl alcohol*
- Ethyl formate*
- Ethylene bromide*
- Methyl acetate*
- Trichloroacetic acid
- Freezing point-solubility, **4**: 104
- Phenyl bromochloroacetate**
- Phenyl dichloroacetate
- Freezing point-solubility, **4**: 152
- Phenyl butyrate**
- Verdet constant, **6**: 430
- Phenyl cyanide.** See Benzonitrile.
- Phenyl dichloroacetate**
- Phenyl bromochloroacetate*
- Phenyl ether**
- Absorption spectra, **5**: 348
 - Boiling point, **3**: 227
 - Cryoscopic constant, **4**: 184
 - Dielectric constant, **6**: 96
 - Magnetic susceptibility, **6**: 363
 - Specific heat, **5**: 113
 - Vapor pressure, **3**: 227
 - Vapor pressure above 1 atm., **3**: 243
 - Viscosity, **5**: 33, 39, 51; **7**: 221
- Acetone*
- Chloroform*
- Diphenyl sulfide*
- Ethyl alcohol*
- Ethyl ether*
- Pentachloroethane*
- Phenetole*
- 1, 3, 5-Trinitrobenzene
- Freezing point-solubility, **4**: 119

Phenyl ethyl ether. See Phenetole.**Phenyl ethyl ketone**

- Verdet constant, **6**: 430

Phenyl isobutyl ether

- Verdet constant, **6**: 430

Phenyl isocyanate

- Absorption spectra, **5**: 340
- Dielectric constant, **6**: 91
- Magnetic susceptibility, **6**: 362
- Refractive index, **7**: 40
- Vapor pressure, **3**: 222

Phenyl isocyanide, viscosity, 7: 218**Phenyl isothiocyanate**

- Absorption spectra, **5**: 332
- Dielectric constant, **6**: 91
- Electrical conductivity, **6**: 144
- Heat of combustion, **5**: 169
- Refractive index, **7**: 40
- Surface tension, **4**: 437, 455
- Verdet constant, **6**: 429

-Carbon disulfide*

-Diethylamine*

-Sulfur

- Freezing point lowering, **4**: 38

Phenyl isopropyl ether

- Verdet constant, **6**: 430

Phenyl methyl ether. See Anisole.**Phenyl octyl ether**

- Verdet constant, **6**: 431

Phenyl oenanthate

- Verdet constant, **6**: 431

Phenyl propionate

- Verdet constant, **6**: 430

Phenyl propyl ether

- Verdet constant, **6**: 430

Phenyl salicylate

- Absorption spectra, **5**: 349
- Birefringence, magnetic, **7**: 112, 113
- Cryoscopic constant, **4**: 184
- Crystallization velocity, **5**: 61
- Diffusion in methyl alcohol, **5**: 73
- Melting point under pressure, **4**: 10
- Specific heat
 - Liquid, **5**: 113
 - Solid, **5**: 104
- Surface tension, **4**: 461

-Acetic acid*

-Amyl acetate*

-Amyl alcohol*

-Antipyrine*

-Benzene*

-Betol*

-d-Bromocamphor*

-Camphor*

-Carbon disulfide*

-Chloral hydrate*

-Chloroacetic acid*

-Cineole*

-Ethyl alcohol*

-Guaiacol*

-Isoamyl alcohol*

-Menthol*

-β-Naphthol*

-β-Naphthol*-Sulfonal

-Nitrobenzene*

-Sulfonal

- Freezing point-solubility, **4**: 152

-Thymol

- Freezing point-solubility, **4**: 158

-Toluene

- Density, **3**: 188

-Trichloroacetic acid

- Freezing point-solubility, **4**: 104

-Urethan

- Freezing point-solubility, **4**: 112

Phenyl thiocyanate

- Viscosity, **5**: 41; **7**: 218

-Anethole*

-α-Bromonaphthalene*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Phenyl thiocyanate.—(Continued)

-Carbon disulfide*

-Diethylamine*

-Dimethylamine*

Phenyl p-tolyl ketone

Refractive index, 7: 30

Phenylacetaldehyde

Dielectric constant, 6: 93

Refractive index, 7: 43

Phenylacetamide

Boiling point elevation in aqueous solution, 3: 327

Surface tension, 4: 457

Verdet constant, 6: 429

-Acetone*

-Chloroform*

-Ethyl alcohol*

Phenylacetic acid

Absorption spectra, 5: 343, 367

Boiling point elevation in aqueous solution, 3: 327

Cryoscopic constant, 4: 183

Density, aqueous solution, 3: 114; 7: 69

Dielectric constant, 6: 93

Electrical conductivity, aqueous solution, 6: 285

Esterification constant, 7: 138

Heat of combustion, 5: 165

Heat of fusion, 5: 133

Photoluminescence, 5: 387

Refractive index, aqueous solution, 7: 69

Solubility in water, 3: 391; 4: 253

Vapor pressure, 3: 224

Verdet constant, 6: 429

Viscosity, 7: 219

-Benzene*

-Benzoic acid*

-Chloroform*

-Chloroacetic acid*

-Dichloroacetic acid*

-Dimethylpyrone*

-Ethyl alcohol*-Water

-Ethyl ether*

-Hydrocinnamic acid*

-Hydrogen chloride*

-Molybdenum trioxide*

-Picric acid

Freezing point-solubility, 4: 120

-Sulfuric acid

Freezing point-solubility, 4: 188

-Toluene

Density, 3: 187

-Trichloroacetic acid

Freezing point-solubility, 4: 103

-Xylene

Distribution coefficients in water, 3: 431

Phenylacetoneitrile

Absorption spectra, 5: 342

-Iodine*

Phenylacetylene

Absorption spectra, 5: 333, 342

Birefringence, magnetic, 7: 111

Heat of combustion, 5: 163

Magnetic susceptibility, 6: 362

Refractive index, 7: 42

Viscosity, 5: 50; 7: 219

-Isoamyl acetate*

Phenylacridine

-Chloroform*

5-Phenylacridine

-Picric acid

Freezing point-solubility, 4: 121

Phenylacridinium chloride

-Chloroform*

Phenylacridinium iodide

-Chloroform*

Phenylalanine

Absorption spectra, ultra-violet, 5: 373

Phenylalanine.—(Continued)

Electrical conductivity, aqueous solution, 6: 292

Heat of combustion, 5: 168

Optical rotatory power, 7: 376

Solubility in salt solutions, 4: 421

Viscosity, aqueous solution, 5: 20

Phenylammonium formate

-Formic acid*

Phenylammonium iodide

-Iodine*-Nitrobenzene

Phenylammonium phenolate

Solubility in water, 3: 392

Phenylarsine dichloride

Vapor pressure, 3: 220

Phenylazide, absorption spectra, 5: 373**Phenylazoimide**, vapor pressure, 3: 221**1-Phenyl-4-benzoyl-1-, 3-butadiene**

Magnetic susceptibility, 6: 364

Phenylbromoacetic acid

Electrical conductivity, aqueous solution, 6: 284

Optical rotatory power, 7: 365

 β -Phenyl- α -bromopropionic acid

Electrical conductivity, aqueous solution, 6: 290

Optical rotatory power, 7: 365

Phenylbutadiene

Birefringence, magnetic, 7: 111

Magnetic susceptibility, 6: 363

Refractive index, 7: 49

1-Phenyl-2-butene

Heat of combustion, 5: 163

1-Phenyl-3-butene

Heat of combustion, 5: 163

1-Phenyl-3-butene

Heat of combustion, 5: 163

Phenylchloroacetic acid

Electrical conductivity, aqueous solution, 6: 284

Optical rotatory power, 7: 365

Phenylchloroform

Birefringence, magnetic, 7: 111

Phenylcinchoninic acid

-Ethyl alcohol*

1-Phenylcyclohexan-1, 2-diol

Heat of combustion, 5: 164

Phenyl diazomethane

Absorption spectra, 5: 379

Phenyl diazonium chloride

Heat of solution in water, 5: 149

Phenyl dimethylammonium bromide

Surface tension, 4: 458

Phenyl dimethylpyrazoles

Refractive index, 7: 53

o-Phenylenediamine

Absorption spectra, 5: 339

Solubility in water, 4: 252

Verdet constant, 6: 429

-m-Aminophenol*

-Benzene*

-Benzhydrol*

-Catechol*

-1, 6-Dihydroxynaphthalene*

-1, 8-Dihydroxynaphthalene*

-2, 3-Dihydroxynaphthalene*

-2, 6-Dihydroxynaphthalene*

-2, 7-Dihydroxynaphthalene*

-Dinitrobenzene (o-, m-, p-)*

-2, 4-Dinitrophenol*

-2, 4-Dinitrotoluene*

-Hydroquinol*

-Isoamyl acetate*

-Naphthol (α -, β -)*

-Nitrophenol (o-, m-, p-)*

-Nitrosodimethylaniline*

-Phenol*

-Pyrogallol

Freezing point-solubility, 4: 140

-Resorcinol

Freezing point-solubility, 4: 138

o-Phenylenediamine.—(Continued)

-Trimethylcarbinol

Freezing point-solubility, 4: 116

-1, 3, 5-Trinitrobenzene

Freezing point-solubility, 4: 118

-Trinitrotoluene

Freezing point-solubility, 4: 143

-Triphenylmethane

Freezing point-solubility, 4: 143

m-Phenylenediamine

Absorption spectra, 5: 339

Heat of solution in water, 5: 149

Refractive index, 7: 38

Solubility in water, 4: 252

Verdet constant, 6: 429

-m-Aminophenol*

-Aniline*

-Benzene*

-Catechol*

-1, 4-Dihydroxynaphthalene*

-1, 6-Dihydroxynaphthalene*

-1, 8-Dihydroxynaphthalene*

-2, 3-Dihydroxynaphthalene*

-2, 6-Dihydroxynaphthalene*

-2, 7-Dihydroxynaphthalene*

-Dinitrobenzene (o-, m-, p-)*

-2, 4-Dinitrophenol*

-2, 4-Dinitrotoluene*

-Hydroquinol*

-Isoamyl acetate*

-Naphthol (α -, β -)*

-Nitrophenol (o-, m-, p-)*

-Nitrosodimethylaniline*

-Phenol*

-Pyrogallol

Freezing point-solubility, 4: 140

-Resorcinol

Freezing point-solubility, 4: 138

-Trimethylcarbinol

Freezing point-solubility, 4: 116

-1, 3, 5-Trinitrobenzene

Freezing point-solubility, 4: 118

-Trinitrotoluene

Freezing point-solubility, 4: 143

-Triphenylcarbinol

Freezing point-solubility, 4: 143

-Triphenylmethane

Freezing point-solubility, 4: 143

p-Phenylenediamine

Absorption spectra, 5: 339

Heat of combustion, 5: 168

Heat of solution in water, 5: 149

Solubility in water, 4: 252

-m-Aminophenol*

-Benzene*

-Benzhydrol*

-Catechol*

-1, 4-Dihydroxynaphthalene*

-1, 6-Dihydroxynaphthalene*

-1, 8-Dihydroxynaphthalene*

-2, 3-Dihydroxynaphthalene*

-2, 6-Dihydroxynaphthalene*

-2, 7-Dihydroxynaphthalene*

-Dinitrobenzene (m-, p-)*

-2, 4-Dinitrophenol*

-2, 4-Dinitrotoluene*

-Diphenylmethane*

-Hydroquinol*

-Naphthol (α -, β -)*

-Nitrophenol (o-, m-, p-)*

-Nitrosodimethylaniline*

-Phenol*

-Pyrogallol

Freezing point-solubility, 4: 140

-Resorcinol

Freezing point-solubility, 4: 138

-1, 3, 5-Trinitrobenzene

Freezing point-solubility, 4: 118

-Trinitrotoluene

Freezing point-solubility, 4: 143

* Data for system will be found under this compound in Index. Full explanation on page vii.

p-Phenylenediamine.—(Continued)

-Triphenylcarbinol

Freezing point-solubility, 4: 144

-Triphenylmethane

Freezing point-solubility, 4: 144

o-Phenylenediamine trihydrochloride

Heat of solution in water, 5: 150

o-Phenylenesuccinamide

-Acetic acid*

Phenylethane

Viscosity, 5: 50

-Isoamyl acetate*

Phenylethyl acetate

Dielectric constant, 6: 95

Phenylethyl alcohol

Birefringence, magnetic, 7: 111

Viscosity, 7: 219

-Ethyl alcohol*-Water

Phenylethylamine

-Xylene

Distribution coefficients in water, 3: 431

α-Phenylethylamine

Optical rotatory power, 7: 363

Viscosity, 7: 219

β-Phenylethylamine, viscosity, 7: 219**Phenylethylcarbinol**

Surface tension, 4: 459

Verdet constant, dispersion of, 6: 434

Phenylethylene

Verdet constant, 6: 429

Viscosity, 5: 50

-Isoamyl acetate*

Phenylethylmethylcarbinol

Surface tension, 4: 460

Verdet constant, 6: 430

Phenylfluoroform

Birefringence, magnetic, 7: 111

Magnetic susceptibility, 6: 362

β-Phenylglyceric acid

Crystallography, 1: 329

Electrical conductivity, aqueous solution, 6: 291

Optical rotatory power, 7: 385

Phenylglycine

Absorption spectra, 5: 343

Electrical conductivity, aqueous solution, 6: 286

Heat of combustion, 5: 168

Optical rotatory power, 7: 376

Phenylglycolic acid

Density, aqueous solution, 3: 112; 7: 69

Refractive index, aqueous solution, 7: 69

-Molybdenum trioxide*

Phenylhydrazine

Absorption spectra, 5: 339

Birefringence, 7: 111

Boiling point, aqueous solutions, 3: 311

Cryoscopic constant, 4: 183

Dielectric constant, 6: 90

Freezing point lowering of aqueous solution, 4: 263

Heat of combustion, 5: 168

Heat of fusion, 5: 133

Heat of solution in water, 5: 149

Magnetic susceptibility, 6: 362

Refractive index, 7: 38

Solubility in water, 3: 389; 4: 252

Pressure, effect of, 3: 393

Surface tension, 4: 454

Verdet constant, 6: 429

Viscosity, 5: 44; 7: 217

-o-Chlorophenol*

-Magnesium bromide*

-Phenol*

Phenylhydrazine hydrate

Cryoscopic constant, 4: 184

Phenylhydrazine hydrochloride

Heat of solution in water, 5: 150

-Ethyl alcohol*

-Methyl alcohol*

Phenylhydroxylamine

Heat of combustion, 5: 168

Magnetic susceptibility, 6: 362

-Aniline*

cis-Phenylisocrotonic acid

Heat of combustion, 5: 166

Phenylmalonic acid

Decomposition, kinetics of, 7: 122

Phenylmethylcarbinol

Verdet constant, dispersion of, 6: 434

Phenylmethylnitrosoamine

Absorption spectra, 5: 341

Surface tension, 4: 456

Phenylmethylamine (α-, β-)

Absorption spectra, ultra-violet, 5: 364

Heat of combustion, 5: 168

Phenylparaconic acid

Heat of combustion, 5: 166

1-Phenyl-2-pentene

Heat of combustion, 5: 164

Refractive index, 7: 54

Phenylpropargyl alcohol

Heat of combustion, 5: 164

Phenylpropiolamide

Magnetic susceptibility, 6: 363

Verdet constant, 6: 430

Phenylpropionic acid

Heat of combustion, 5: 165

Verdet constant, 6: 430

-Isoamyl acetate*

-Methyl alcohol*

Phenylpropionic acid

Absorption spectra, 5: 367

Cryoscopic constant, 4: 183

Viscosity, 7: 220

-Isoamyl acetate*

-Methyl alcohol*

-Sodium β-phenylpropionate

Freezing point-solubility in water, 4: 421

Phenylpropyl alcohol

Absorption spectra, 5: 333

Refractive index, 7: 47

Viscosity, 7: 220

3-Phenylpropylamine, viscosity, 7: 220**Phenylsuccinic acid**

Electrical conductivity, aqueous solution, 6: 295

Heat of combustion, 5: 166

Optical rotatory power, 7: 368

Phenylsuccinic anhydride

Heat of combustion, 5: 166

Phenylsulfone

Magnetic susceptibility, 6: 363

-Ethyl alcohol*

-Menthol*

-Menthone*

Phenylthiourea

Activity coefficient, 7: 246

-Ethyl alcohol*

Phenylurea

Boiling point elevation in aqueous solution, 3: 327

-Acetone*

-Ethyl alcohol*

Phenylurethan

Surface tension, 4: 459

Viscosity, 7: 220

-Acetone*

-Benzene*

-Chloroform*

-Ethyl alcohol*

-Ethyl ether*

Philippine Islands

Weights and measures, 1: 10

Phillipsite, dehydration behavior, 7: 313**Phloroglucinol**

Absorption spectra, 5: 332, 339

Boiling point elevation in aqueous solution, 3: 327

Phloroglucinol.—(Continued)

Crystallography, 1: 326

Electrical conductivity, aqueous solution, 6: 273

Heat of solution in water, 5: 149

Magnetic susceptibility, 6: 362

Phoenicochroite, density, 1: 133**Phonic level**, 6: 450**Phonodeik**, Miller, 6: 457**Phonolite**, compressive strength, 2: 47**Phonometer**

Ballistic, 6: 457

Webster, 6: 457

Phormium fiber, 2: 236**Phorone**

Absorption spectra, 5: 345, 374

Refractive index, 7: 47

Surface tension, 4: 459

Viscosity, 7: 220

-Benzene*

-Isoamyl acetate*

Phosgene

Absorption spectra, 5: 331, 334

Boiling point, 3: 215, 330

Critical point data, 3: 237, 248

Decomposition, kinetics of, 7: 117

Density, liquid, 3: 28

Electrical conductivity, 6: 143

Free energy, 7: 244

Heat of formation, 5: 181

Orthobaric density, 3: 237

Refractivity, 7: 10

Solubility in non-aqueous liquids, 3: 268

Surface tension, 4: 447

Toxicology, 2: 320

Vapor pressure

Liquid, 3: 215

Solid, 3: 213

Vapor pressure above 1 atm., 3: 237

-Acetic acid*

-Acetic anhydride*

-Aluminum barium chloride*

-Aluminum calcium chloride*

-Aluminum chloride*

-Aluminum sodium chloride*

-Aluminum strontium chloride*

-Antimony pentachloride*

-Antimony trichloride*

-Arsenous chloride*

-Benzoic acid*

-Benzoic anhydride*

-Chlorine*

-Dibenzyl*

-p-Dibromobenzene*

-p-Dichlorobenzene*

-Diphenyl*

-Hexachloroethane*

-Iodine*

-Iodine trichloride*

-Naphthalene*

-Sulfur dichloride

Boiling point elevation, 3: 330

-Sulfur monochloride

Boiling point elevation, 3: 330

Phosgenite

Density, 1: 117

Refractive index, 1: 117, 167; 7: 20

Thermal conductivity, 5: 232

Phosphine

Boiling point, 1: 109, 162; 3: 229

Critical point data, 3: 229, 248

Decomposition, kinetics of, 7: 116

Density

Gas, 3: 3

Liquid, 1: 109; 3: 23

Dielectric constant, 6: 76

Heat of formation, 5: 180

Melting point, 1: 109

Orthobaric density, 3: 229

* Data for system will be found under this compound in Index. Full explanation on page vii.

Phosphine.—(Continued)

- Refractive index
- Gas, **7: 8**
- Liquid, **1: 109, 165**
- Solubility in water, **3: 259**
- Thermal expansion, **3: 16**
- Toxicology, **2: 320**
- Vapor pressure, **3: 213**
- Vapor pressure above 1 atm., **3, 329**
- Viscosity, gas, **5: 3**
- Hydrogen chloride*
- Phosphochalite, density, **1: 12**
- Phosphonium bromide
 - Heat of formation, **5: 180**
 - Vapor pressure, **3: 207**
- Phosphonium chloride
 - Boiling point, **3: 230**
 - Critical point data, **3: 230, 248**
 - Heat of formation, **5: 180**
 - Melting point under pressure, **4: 10**
 - Triple point, **3: 230; 4: 10**
 - Vapor pressure, **3: 207**
 - Vapor pressure above 1 atm., **3: 230**
 - Volume change on melting, **4: 10**
- Phosphonium iodide
 - Heat of formation, **5: 180**
 - Vapor pressure, **3: 207; 7: 242**
 - X-ray diffraction data, **1: 341**
- Phosphor bronze
 - Electrical conductivity, **6: 172**
 - Magnetic field, effect of, **6: 422**
 - Specific heat, **5: 121**
- Phosphorescence
 - Energy emitted during, **5: 390**
- Phosphoric acid
 - Cryoscopic constant, **4: 214**
 - Crystallization velocity, **5: 61**
 - Density, aqueous solution, **3: 61**
 - Diffusion in water, **5: 65**
 - Electrical conductivity, **6: 142**
 - Aqueous solution, **6: 241, 243, 260**
 - Freezing point lowering of aqueous solution, **4: 255, 261**
 - Heat of formation, **5: 180**
 - Ionization constants, **7: 241**
 - Melting point under pressure, **4: 10**
 - Solubility in water, **4: 218**
 - Surface tension, aqueous solution, **4: 464**
 - Vapor pressure lowering in aqueous solution, **3: 293**
 - Viscosity, aqueous solution, **5: 13**
 - X-rays, absorption coefficient, **6: 13**
 - Ammonium hydroxide*
 - Ammonium phosphate*
 - Calcium oxide*
 - Citric acid*-Sodium hydroxide
 - Ethyl ether*
 - Ferric oxide*
 - Ferric phosphate*
 - Ferrous oxide*
 - Lead oxide*
 - Magnesium hydrogen phosphate*
 - Magnesium oxide*
 - Molybdenum trioxide*
 - Orthophosphorous acid*
 - Potassium hydroxide
 - Density, aqueous solution, **3: 97**
 - Freezing point-solubility in water, **4: 369, 392**
 - Refractive index, aqueous solution, **7: 92**
 - Potassium phosphate
 - Density, aqueous solution, **3: 97**
 - Sodium hydroxide
 - Freezing point-solubility in water, **4: 369, 392**
 - Sodium phosphate
 - Density, aqueous solution, **3: 97**
 - Sodium sulfate
 - Density, aqueous solution, **3: 97**

Phosphoric acid.—(Continued)

- Zinc oxide
 - Freezing point-solubility in water, **4: 368**
- Phosphorus
 - Allotropic forms, **4: 11**
 - Boiling point, **1: 102**
 - Chemiluminescence, **5: 389**
 - Compressibility, **3: 46**
 - Critical constants, **1: 102**
 - Critical potentials, **6: 71, 72**
 - Density
 - Liquid, **1: 102; 3: 21**
 - Solid, **1: 104; 3: 21**
 - Vapor, **7: 241**
 - Dielectric constant, **6: 75, 99**
 - Electrical conductivity
 - Liquid, **1: 103**
 - Solid, **1: 104; 6: 142, 153**
 - Emission spectra, **5: 309**
 - Heat of fusion, **1: 104; 5: 131**
 - Heat of vaporization, **5: 135**
 - Internal pressure, **4: 19**
 - Isotopes, **1: 47**
 - Magnetic susceptibility, **6: 355**
 - Melting point, **1: 104**
 - Melting point under pressure, **4: 11, 17**
 - Orthobaric density, **3: 202**
 - Persistent lines, **5: 323**
 - Pressure-volume relations for gas, **3: 435**
 - Quantum numbers, **5: 408**
 - Refractive index
 - Gas, **7: 8**
 - Solid, **7: 11**
 - Specific heat
 - Gas, **5: 80**
 - Solid, **1: 104; 5: 93**
 - Spectral series, **5: 403**
 - Thermal expansion
 - Liquid, **1: 102; 3: 21**
 - Solid, **1: 104; 3: 21**
 - Thermochemistry, **5: 180**
 - Transition temperature, **4: 6**
 - Vapor pressure, **3: 201, 202**
 - Verdet constant, **6: 426**
 - Volume change on melting, **4: 11**
 - X-ray absorption limits, **6: 36, 44**
 - X-ray crystal structure, **1: 340**
 - X-ray emission spectra, **6: 36**
 - X-ray series, limiting frequencies, **6: 35**
 - Aluminum*-Copper
 - Arsenic*-Copper-Iron-Manganese
 - Benzene*
 - Carbon*-Iron
 - Carbon*-Iron-Sulfur
 - Carbon disulfide*
 - Carbon disulfide*-Sulfur
 - Chlorobenzene*
 - Cobalt*
 - Copper*
 - Copper*-Tin
 - Decane*
 - p-Dibromobenzene*
 - p-Dichlorobenzene*
 - Ethyl ether*
 - Ethylene bromide*
 - Iodine*
 - Iron*
 - Iron*-Manganese
 - Iron*-Sulfur
 - Manganese*
 - Naphthalene*
 - Nickel*
 - Phenanthrene*
 - Selenium
 - Freezing point lowering, **4: 38**
 - Sulfur
 - Freezing point-solubility, **4: 24**
- Phosphorus diiodide
 - Heat of formation, **5: 180**
- Phosphorus heptasulfide
 - Carbon disulfide*

Phosphorus nitride

- Heat of formation, **5: 180**
- Phosphorus oxybromide
 - Heat of formation, **5: 180**
 - Benzene*
 - Carbon tetrachloride*
- Phosphorus oxybromodichloride
 - Density, **3: 23**
- Phosphorus oxychloride
 - Boiling point, **1: 109, 162**
 - Cryoscopic constant, **4: 214**
 - Density, **1: 109; 3: 23**
 - Dielectric constant, **6: 76**
 - Electrical conductivity, **6: 142**
 - Heat of formation, **5: 180**
 - Heat of fusion, **5: 131**
 - Melting point, **1: 109**
 - Refractive index, **1: 109, 165**
 - Surface tension, **4: 447**
 - Aluminum bromide*-Carbon disulfide
 - Benzene*
 - Carbon disulfide*
 - Carbon tetrachloride*
 - Chloroform*
 - Ethyl ether*
- Phosphorus oxyfluoride, density, gas, **3: 3**
- Phosphorus pentabromide
 - Heat of formation, **5: 180**
 - Bromine*
- Phosphorus pentachloride
 - Heat of formation, **5: 180**
 - Surface tension, **4: 447**
 - Vapor density, **7: 241**
 - Vapor pressure, **3: 207; 7: 242**
 - Carbon tetrachloride*
- Phosphorus pentafluoride
 - Boiling point, **3: 230**
 - Density, gas, **3: 3**
 - Vapor pressure above 1 atm., **3: 230**
- Phosphorus pentoxide
 - Density, aqueous solution, **7: 66**
 - Drying agent, value as, **3: 385**
 - Heat of formation, **5: 180**
 - Magnetic susceptibility, **6: 356**
 - Refractive index, aqueous solution, **7: 66**
 - Lead oxide*
- Phosphorus sesquisulfide
 - Benzene*
 - Carbon disulfide*
 - Toluene
 - Freezing point-solubility, **4: 190**
- Phosphorus sulfochloride
 - Boiling point, **1: 110, 162**
 - Density, **1: 110; 3: 23**
 - Melting point, **1: 110**
 - Refractive index, **1: 110, 166**
 - Surface tension, **4: 447**
 - Benzene*
- Phosphorus sulfofluoride
 - Boiling point, **3: 230**
 - Vapor pressure above 1 atm., **3: 230**
- Phosphorus tribromide
 - Boiling point, **1: 109, 162**
 - Density, **1: 109; 3: 23**
 - Dielectric constant, **6: 76**
 - Heat of formation, **5: 180**
 - Melting point, **1: 109**
 - Refractive index, **1: 109, 165**
 - Surface tension, **4: 447**
 - Aluminum bromide*
- Phosphorus trichloride
 - Boiling point, **1: 109, 162; 3: 329**
 - Compressibility, **3: 40**
 - Density, **1: 109; 3: 23**
 - Dielectric constant, **6: 76**
 - Heat of formation, **5: 180**
 - Heat of vaporization, **5: 136**
 - Melting point, **1: 109**
 - Refractive index
 - Gas, **7: 8**
 - Liquid, **1: 109, 165**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Phosphorus trichloride.—(Continued)

Specific heat

Gas, **5**: 81Solid, **5**: 95Surface tension, **4**: 447Toxicology, **2**: 320Verdet constant, **6**: 426Vapor pressure, **3**: 213

-Anthracene*

-Antimony triiodide*

-Arsenous iodide*

-Benzaldehyde*

-Benzene*

-Camphor*

-Carbon disulfide*

-Chlorine*

-Stannic iodide

Boiling point elevation, **3**: 329**Phosphorus trifluoride**Boiling point, **3**: 229Vapor pressure above 1 atm., **3**: 229**Phosphorus triiodide**Dielectric constant, **6**: 76Heat of formation, **5**: 180Surface tension, **4**: 447

-Antimony triiodide*

-Arsenous iodide*

Phosphorus trioxideVapor pressure, **3**: 213Surface tension, **4**: 447**Phosphotungstic acid**Density, aqueous solution, **3**: 105**Phosphuranylite**Refractive index, **1**: 134, 172**Photochemical kinetics**, **7**: 159**Photochemical reactions**Quantum sensitivity, **7**: 167Temperature coefficients, **7**: 164**Photoconductivity**, **6**: 66**Photo-electric constant**, **1**: 18Definition, **1**: 40**Photoelectric effect**, **6**: 67Energy sensitivity, **6**: 67**Photoelectricity**, **6**: 66**Photoelectromotive force**, **6**: 66**Photographic developers**Reduction potentials, **5**: 441Silver reduction equivalent, **5**: 439Watkins' factor, **5**: 440**Photographic development**Temperature coefficient, **5**: 440Velocity equations, **5**: 439**Photographic image**Photometric constant, **5**: 441**Photographic materials**Spectral sensitivity, **5**: 442**Photographic papers, gloss**, **5**: 445**Photographic plates**Astro gamma, **5**: 444Density, **5**: 441Resolving power, **5**: 442Sensitometric constants, **5**: 442Sharpness, **5**: 444**Photography**, **5**: 438**Photoluminescence**, **5**: 386**Photometric filters**, **5**: 435**Photometric standards**, **5**: 434**Photometry**Color filters for, **5**: 264, 435Trichromatic, filters for, **5**: 272**Phototropy**, **7**: 165-167**Phthalamide**Magnetic susceptibility, **6**: 362**Phthalanil**Absorption spectra, **5**: 349

-Pyridine

Density, **3**: 172Viscosity, **5**: 43**Phthalein dyes**Absorption spectra, **7**: 188Indicators, use as, **1**: 86**Phthalic acid**Absorption spectra, **5**: 342Boiling point elevation in aqueous solution, **3**: 327Density, aqueous solution, **3**: 114Diffusion in benzene, **5**: 74Diffusion in methyl alcohol, **5**: 73Electrical conductivity, aqueous solution, **6**: 284Heat of combustion, **5**: 165Heat of solution in water, **5**: 150Magnetic susceptibility, **6**: 362Photoluminescence, **5**: 386Solubility in water, **4**: 252, 253Specific heat, **5**: 104

-Acetic acid*

-Ammonium chloride*

-Barium chloride*

-Calcium chloride*

-Cesium chloride*

-Ethyl ether*

-Hydrogen chloride*

-Lithium chloride*

-Magnesium chloride*

-Mercuric cyanide*

-Nitric acid*

-Phenol*

-Phthalic anhydride

Freezing point-solubility, **4**: 152

-Potassium acetate

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 420

-Potassium bromate

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 420

-Potassium bromide

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 420

-Potassium chlorate

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 419

-Potassium chloride

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 419

-Potassium fluoride

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 419

-Potassium iodate

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 420

-Potassium iodide

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 420

-Potassium nitrate

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 420

-Potassium sulfate

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 420

-Rubidium chloride

Density, aqueous solution, **3**: 103Freezing point-solubility in water, **4**: 420

-Sodium chloride

Density, aqueous solution, **3**: 102Freezing point-solubility in water, **4**: 419

-Sodium nitrate

Density, aqueous solution, **3**: 102Freezing point-solubility in water, **4**: 419**Phthalic acid.**—(Continued)

-Sodium sulfate

Density, aqueous solution, **3**: 102Freezing point-solubility in water, **4**: 419

-Sucrose

Freezing point-solubility in water, **4**: 419**o-Phthalic aldehyde**Absorption spectra, **5**: 342Solubility in water, **3**: 391**Phthalic anhydride**Absorption spectra, **5**: 342Boiling point, **3**: 224Heat of combustion, **5**: 166Saponification constant, **7**: 136Vapor pressure, **3**: 224

-Camphor*

-Ethyl alcohol*

-Naphthalene*

-Nitrobenzene*

-Phthalic acid*

PhthalideAbsorption spectra, **5**: 342Crystallization velocity, **5**: 61Density, **3**: 45Dielectric constant, **6**: 93Heat of combustion, **5**: 166Melting point under pressure, **4**: 16Refractive index, **7**: 42

-Acetamide*

-Triphenylguanidine

Freezing point-solubility, **4**: 152**Phthalimide**Absorption spectra, **5**: 342Electrical conductivity, aqueous solution, **6**: 284Heat of combustion, **5**: 168Magnetic susceptibility, **6**: 362

-Pyridine

Density, **3**: 171Viscosity, **5**: 42**Phthalimidine**Absorption spectra, **5**: 342

-Chloroform*

Phthalyl chlorideAbsorption spectra, **5**: 342Heat of combustion, **5**: 169Intramolecular transformation, **7**: 118Refractive index, **7**: 42Surface tension, **4**: 457Verdet constant, **6**: 429

sym.-Phthalyl chloride

-asym.-Phthalyl chloride

Freezing point-solubility, **4**: 180**Phthalylphenylhydrazide**Transition temperature, **4**: 8**Phthalylphenylmethylhydrazide**Transition temperature, **4**: 8**Physostigmine**Crystallography, **1**: 334Optical rotatory power, **7**: 475Phytosterol, optical rotatory power, **7**: 463Phytosteryl acetate (α -, β -)Optical rotatory power, **7**: 463

-Cholesteryl acetate*

PickeringiteDensity, **1**: 142Refractive index, **1**: 142, 168 **α -Picoline**Absorption spectra, **5**: 332, 339Density, aqueous solution, **3**: 112, 113Dielectric constant, **6**: 90Electrical conductivity, **6**: 144Aqueous solution, **6**: 274Heat of combustion, **5**: 168Heat of vaporization, **5**: 137Refractive index, **7**: 38Specific heat, **5**: 110Surface tension, **4**: 454Viscosity, **7**: 217

-Formic acid*

* Data for system will be found under this compound in Index. Full explanation on page vii.

β -Picoline

Absorption spectra, **5**: 339
 Density, aqueous solution, **3**: 112, 113
 Heat of combustion, **5**: 168
 Refractive index, **7**: 38
 Solubility in water, **3**: 389
 Viscosity, **7**: 217

 γ -Picoline, heat of combustion, **5: 168****Picolinic acid**

Absorption spectra, **5**: 339
 Refractive index, **7**: 29

Picramide

Absorption spectra, **5**: 338
*-Acenaphthene**
*-Anthracene**
*-Fluorene**
*-Naphthalene**
*-Phenanthrene**
-Picric acid

Freezing point-solubility, **4**: 175

-Retene

Freezing point-solubility, **4**: 127

***o*-Picraminobenzoic acid**

-Potassium hydroxide

Freezing point-solubility in water,
4: 422

Picric acid

Absorption spectra, **5**: 338; **7**: 204
 Activity coefficient, **7**: 246
 Boiling point elevation in aqueous solution, **3**: 327
 Crystallization velocity, **5**: 61
 Detonation velocity, **7**: 493
 Diffusion in water, **5**: 70
 Explosive, properties as, **7**: 490
 Freezing point lowering of aqueous solution, **4**: 262
 Heat of explosion, **7**: 490
 Heat of solution in water, **5**: 149
 Pyroelectric effect, **6**: 209
 Solubility in water, **4**: 253
 Specific heat, **5**: 102
 Vapor pressure, **3**: 209

*-Acenaphthene**

*-Acenaphthylene**

*-Acetic acid**

-Acetone-Carbon disulfide*

*-Acetonitrile**

*-Acetophenone**

*-Amyl alcohol**

*-Anthracene**

*-Azobenzene**

*-Benzene**

*-Benzhydrol**

*-Benzophenone**

*- α -Benzyl-naphthalene**

*-Bromoform**

*-Bromonaphthalene (α -, β -)**

*-Camphor**

*-Carbazole**

*-Carbon dioxide**

-Carbon dioxide-Naphthalene*

-Carbon disulfide-Ethyl ether*

-Carbon disulfide-Methylal*

*-Catechol**

*-Chloroform**

-Chloroform-Ethyl ether*

*-Chloronaphthalene (α -, β -)**

*-Cinnamic acid**

*-Cresol (o -, m -, p -)**

*-Dibenzyl**

*-Dichloromethane**

*-Dimethyl oxalate**

*-Dimethylpyrone**

*-*m*-Dinitrobenzene**

*-2, 4-Dinitrophenol**

*-2, 4-Dinitrotoluene**

*-Diphenyl**

*-Diphenylamine**

*-Diphenylmethane**

*-Ethyl alcohol**

Picric acid.—(Continued)

-Ethyl alcohol-Phenanthrene*

-Ethyl alcohol-Phenanthrene picrate*

*-Ethyl ether**

*-Fenchone**

*-Fluorene**

*-Glycol diacetate**

*-Guaiacol**

*-Hydrogen chloride**

*-*m*-Hydroxybenzaldehyde**

*-Methyl acetate**

*-Methyl alcohol**

*-Methylpicric acid**

*-Naphthalene**

*- β -Naphthol**

*-Nitric acid**

*-Nitroacenaphthene**

*-Nitrogen tetroxide**

*- α -Nitronaphthalene**

*-Nitrophenol (o -, m -, p -)**

*-Phenanthrene**

*-Phenol**

*-Phenylacetic acid**

*-5-Phenylacridine**

*-Picramide**

-Picryl chloride

Freezing point-solubility, **4**: 117

-Propyl alcohol

Boiling point elevation, **3**: 340

-Pyridine

Boiling point elevation, **3**: 342

-Resorcinol

Freezing point-solubility, **4**: 119

-Retene

Freezing point-solubility, **4**: 121

-Stilbene

Freezing point-solubility, **4**: 121

-Succinic acid

Freezing point-solubility, **4**: 114

-Succinimide

Freezing point-solubility, **4**: 113

-Tetralin

Distribution coefficients in water, **3**:
 428

-Tetryl

Freezing point-solubility, **4**: 119

-Thymol

Freezing point-solubility, **4**: 120

-Toluene

Distribution coefficients in water, **3**:
 428

-Toluic acid (o -, m -)

Freezing point-solubility, **4**: 120

-1, 3, 5-Trinitrobenzene

Freezing point-solubility, **4**: 118

-Trinitrotoluene

Freezing point-solubility, **4**: 175

-Triphenylcarbinol

Freezing point-solubility, **4**: 121

-Triphenylmethane

Freezing point-solubility, **4**: 121

Picromerite

Density, **1**: 158

Refractive index, **1**: 158, 168

See also Magnesium potassium sulfate.

Picrotin, optical rotatory power, **7: 475****Picrotinic acid, optical rotatory power, **7**: 465****Picrotoxinin**

Absorption spectra, **5**: 351

Crystallography, **1**: 333

Optical rotatory power, **7**: 475

Picrotoxininic acid, optical rotatory power, **7: 465****Picrotoxinonic acid, optical rotatory power, **7**: 465****Picryl chloride**

*-Acenaphthene**

*-Acenaphthylene**

*-Acetone**

*-Acetonitrile**

Picryl chloride.—(Continued)

*-Anthracene**

*-2, 4-Dinitrochlorobenzene**

*-Ethyl alcohol**

*-Fluorene**

*-Methyl alcohol**

*-Naphthalene**

*-Phenanthrene**

*-Picric acid**

-Retene

Freezing point-solubility, **4**: 117

Picryl cinchonine

*-Acetone**

Picryl sulfide

-Trinitroanisole

Freezing point-solubility, **4**: 147

-2, 4, 6-Trinitrotoluene

Freezing point-solubility, **4**: 146

Pictet's liquid, surface tension, **4**: 442

Pierrot metal, **2**: 381

Piezoelectric constant, conversion factors,
1: 29

Piezoelectric generator, **6**: 455

Piezoelectric resonators, **6**: 211

Piezoelectricity, **6**: 208

Pigments

Albedo, **5**: 262

Paints, density of, **2**: 317

Pilopic acid, optical rotatory power, **7**: 404

Pilosine, optical rotatory power, **7**: 420

Pilosinine, optical rotatory power, **7**: 419

Pimelic acid

Electrical conductivity, aqueous solution, **6**: 283

Heat of combustion, **5**: 165

*-Ethyl ether**

Pin wire brass, **2**: 381; cf. 555, 601

Pinabietic acid

*-Ethyl alcohol**

*-Ethyl ether**

Pinacol

Electrical conductivity, aqueous solution, **6**: 277

Heat of combustion, **5**: 164

Verdet constant, **6**: 429

Pinacolin

Dielectric constant, **6**: 91

Surface tension, **4**: 455

Verdet constant, **6**: 429

Pinacone

Azeotropic mixtures, **3**: 322

Dielectric constant, **6**: 91

Solubility in water, **4**: 251

Pinacoyl alcohol, heat of combustion, **5**:
 164

Pinakiolite

Density, **1**: 142

Refractive index, **1**: 142, 173

Pinane, optical rotatory power, **7**: 411

Pinchbeck (alloy), **2**: 381; cf. 469, 555

Pine wood

Density, **2**: 313

Thermal conductivity, **2**: 313

Pinene

Absorption spectra, **5**: 333, 346

Azeotropic mixtures, **3**: 319-322

Density, **3**: 30

Dielectric constant, **6**: 95

Electrical conductivity, **6**: 144

Heat of combustion, **5**: 164

Heat of wetting by, **5**: 142

Optical rotatory power, **7**: 411

Refractive index, **7**: 52

Surface tension, **4**: 460

Verdet constant, dispersion of, **6**: 433

X-rays, absorption coefficient, **6**: 14

*-Benzene**

*-Camphene**

*-Camphor**

*-Carbon disulfide**

*-Ethyl alcohol**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Pinene hydrate, Verdet constant, dispersion of, **6**: 433
Pinene hydrochloride
 Verdet constant, dispersion of, **6**: 433
 -*Borneol**
 -*Camphene**
 -*Camphor**
 -*Ethyl ether**
 -*Hexane**
Pinitol, optical rotatory power, **7**: 405
Pinnoite
 Density, **1**: 142
 Refractive index, **1**: 142, 166
Pinolene
 Heat of combustion, **5**: 164
 Optical rotatory power, **7**: 411
Pinonic acid
 Crystallography, **1**: 330
 Electrical conductivity, aqueous solution, **6**: 296
 Optical rotatory power, **7**: 417
Pioneer metal, **2**: 381
d-Pipecoline
 -*l-Pipecoline*
 Freezing point-solubility, **4**: 144
Piperic acid
 Absorption spectra, **5**: 348
 Heat of solution in water, **5**: 150
Piperidine
 Absorption spectra, **5**: 332, 338
 Boiling point, **3**: 343
 Density, **3**: 29, 33
 Dielectric constant, **6**: 89
 Electrical conductivity, **6**: 144
 Aqueous solution, **6**: 271
 Heat of combustion, **5**: 167
 Heat of solution in water, **5**: 149
 Heat of vaporization, **5**: 137
 Magnetic susceptibility, **6**: 362
 Refractive index, **7**: 38
 Specific heat, **5**: 109
 Surface tension, **4**: 452
 Viscosity, **5**: 39, 40; **7**: 216
 -*Allyl isothiocyanate**
 -*Allyl thiocyanate**
 -*Anthracene**
 -*Benzene**
 -*Cadmium bromide**
 -*Cadmium iodide**
 -*Chloroform**
 -*Cobaltous chloride**
 -*Cyclohexane**
 -*Diphenylamine**
 -*Ethyl alcohol**
 -*Ethyl ether**
 -*Ethyl thiocyanate**
 -*Methyl alcohol**
 -*Silver bromide*
 Boiling point elevation, **3**: 343
 -*Silver chloride*
 Boiling point elevation, **3**: 343
 -*Silver iodide*
 Boiling point elevation, **3**: 343
 -*Silver nitrate*
 Boiling point elevation, **3**: 343
 -*Toluene*
 Density, **3**: 173
 Surface tension, **4**: 473
 -*Xylene*
 Distribution coefficients in water, **3**: 427
 -*Zinc chloride*
 Boiling point elevation, **3**: 343
Piperidine cyanoacetate, electrical conductivity, aqueous solution, **6**: 243
Piperidine derivatives, optical rotatory power, **7**: 406
Piperidine hydrochloride
 Absorption spectra, **5**: 338
 Heat of solution in water, **5**: 149
 -*Ethyl alcohol**

Piperidine picrate
 -*Chloroform**
Piperidinium nitrate
 -*Ethyl alcohol**
Piperine
 Absorption spectra, **5**: 334, 352
 Crystal nuclei, formation of, **5**: 60
 Crystallization velocity, **5**: 61
 -*Carbon tetrachloride**
Piperonal
 Absorption spectra, **5**: 342
 Surface tension, aqueous solution, **4**: 470
 -*Acenaphthene**
 -*Benzoic acid**
 -*Chloroacetic acid**
 -*Trichloroacetic acid*
 Freezing point-solubility, **4**: 103
Piperonal oxime
 -*Isoamyl acetate**
trans-**Piperonylacrylic acid**, heat of combustion, **5**: 166
Piperonylic acid
 Absorption spectra, **5**: 342
 Heat of combustion, **5**: 165
 Heat of solution in water, **5**: 150
 -*Chloroform**
 -*Xylene*
 Distribution coefficients in water, **3**: 430
Pipes, heat, convection in, **5**: 235
Pipestone. See *Catlinite*.
Pirsch's German silver, **2**: 381
Pirssonite
 Density, **1**: 154
 Melting point, **1**: 154
 Refractive index, **1**: 154, 169; **7**: 27
Piston phone, **6**: 455
Pitchblende, density, **1**: 134
Pitches
 Classification, **2**: 171
 Physical properties, **2**: 171
 Thermal expansion, **2**: 172
 Viscosity, **2**: 172
Pitchstone, dehydration behavior, **7**: 313
Pitot-static tubes, **1**: 403
Placet (alloy), **2**: 381
Plagionite, density, **1**: 116
Plancheite
 Density, **1**: 123
 Refractive index, **1**: 123, 167
Planck's constant, **1**: 17; **6**: 27
 Definition, **1**: 40
Planets, characteristics, **1**: 392
Plaster
 Density, **2**: 315
 Sound, transmission of, by, **6**: 459
 Thermal conductivity, **2**: 315
Plaster, gypsum
 Density, **2**: 315
 Thermal conductivity, **2**: 315
Plaster board, **2**: 46
Plaster-of-Paris, **2**: 122
 Thermal conductivity, **2**: 315
Plastic bronze, **2**: 381
Plastics
 Nitrocellulose, **2**: 296
 Chemical behavior, **2**: 298
 Combustion, rate of, **2**: 297
 Electrical conductivity, **2**: 297
 Explosion time, **2**: 297
 Optical properties, **2**: 298
 Physical properties, **2**: 296
 Thermal properties, **2**: 297
 Water, absorption of, by, **2**: 298
 Pyroxylin, **2**: 296
 See also *Phenol resins*.
Platalargan (alloy), **2**: 381
Plates, air forces on, **1**: 405, 406
Platine (alloy), **2**: 381; cf. 465, 546
Platine-au-titre (alloy), **2**: 381; cf. 474, 588

Platinic bromide, heat of formation, **5**: 189
Platinic chloride
 Decomposition pressure, **7**: 274
 Density, aqueous solution, **3**: 67, 107
 Heat of formation, **5**: 189
 Magnetic susceptibility, **6**: 357
 Aqueous solution, **6**: 364
 -*Ethyl ether**
Platinic iodide, heat of formation, **5**: 189
Platiniridium, **2**: 381
Platinite (alloy), **2**: 381; cf. 465, 482
 Electrical conductivity, **6**: 185
Platinoid (alloy), **2**: 381; cf. 475, 480
 Electrical conductivity, **6**: 171
 Magnetic field, effect of, **6**: 422
 Thermoelectric properties, **6**: 222
Platinor (alloy), **2**: 381
Platinous chloride
 Ammine
 Decomposition pressure, **7**: 274
 Heat of decomposition, **7**: 274
 Heat of formation, **5**: 190
 Decomposition pressure, **7**: 274
 Heat of formation, **5**: 189
 Magnetic susceptibility, **6**: 357
 -*Bismuth chloride**
Platinous hydroxide
 Heat of formation, **5**: 189
Platinous iodide
 Amines
 Decomposition pressure, **7**: 274
 Heat of decomposition, **7**: 274
 Heat of formation, **5**: 190
 Decomposition pressure, **7**: 274
Platinum
 Absorption, index of, **5**: 250, 252
 Annealing temperature, **2**: 591
 Boiling point, **1**: 102; **3**: 205
 Brightness, **5**: 246
 Brightness temperature, **1**: 60; **5**: 245
 Color temperature, **5**: 246
 Compressibility, **3**: 47, 48
 Contact potential, **6**: 57
 Corbino effect, **6**: 419
 Density
 Liquid, **1**: 102; **2**: 463
 Solid, **1**: 104; **2**: 456
 Elastic properties, **2**: 588
 Electrical conductivity, **1**: 104; **6**: 136, 137, 138
 Low temperature, **6**: 130, 133
 Magnetic field, effect of, **6**: 422
 Electron emission excited by its positive ion, **6**: 65
 Electrons, absorption of, by, **6**: 61
 Electrons, reflection of, **6**: 63
 Electrons, secondary emission of, **6**: 63
 Electrons, thermal emission of, **6**: 53
 Electrons, transmitted, velocity of, **6**: 62
 Emission, spectral, **5**: 242, 243, 244, 254, 255, 256
 Emission spectra, **5**: 310
 Evaporation, rate of, **5**: 54
 Evaporation from hot filament, **5**: 53
 Hall effect, **6**: 416, 417
 Hardness, **2**: 588
 Heat of fusion, **1**: 104; **2**: 458
 Heat of vaporization, **1**: 102
 Hydrogen, permeability to, **5**: 76
J-Phenomenon, **6**: 1
 Magnetic susceptibility, **6**: 355
 Melting point, **1**: 53, 104
 Peltier coefficient, **6**: 227
 Persistent lines, **5**: 324
 Photoelectric current, **6**: 67
 Photoelectric threshold, **6**: 68
 Photoelectric work function, **6**: 57
 Quantum numbers, **5**: 408
 Radiation temperature, total, **5**: 246
 Refraction, index of, **5**: 250, 252
 Righi-Leduc effect, **6**: 421

* Data for system will be found under this compound in Index. Full explanation on page vii.

Platinum.—(Continued)

- Sound, velocity of, in, **6**: 465
 Specific heat, **5**: 93
 Spectral series, **5**: 403
 Sputtered film on glass, volume conductivity, **4**: 475
 Surface tension, **4**: 440
 Thermal conductivity, **5**: 220, 221
 Thermal expansion, **1**: 104; **2**: 461
 Thermionic work function, **6**: 53, 56
 Thermochemistry, **5**: 189
 Thermoelectric properties, **6**: 214, 225
 Thomson coefficient, **6**: 228
 Vapor pressure, **3**: 205
 Viscosity, **5**: 7
 X-radiation from target of, **6**: 47, 48
 X-ray absorption limits, **6**: 41
 X-ray crystal structure, **1**: 340
 X-ray emission spectra, **6**: 41
 X-ray lines, intensity of, **6**: 26
 X-ray series, limiting frequencies, **6**: 35
 X-rays, absorption, discontinuity in, **6**: 12
 X-rays, absorption coefficient, **6**: 13–15
 Zeeman effect, **5**: 420, 425
 -*Aluminum**
 -*Antimony**
 -*Copper**
 -*Gold**
 -*Iridium**
 -*Lead**
 -*Palladium**
 -*Rhodium*
 Absorption, index of, **5**: 251
 Elastic properties, **2**: 588
 Electrical conductivity, **6**: 195
 Evaporation, velocity of, **5**: 54
 Hardness, **2**: 588
 Refraction, index of, **5**: 251
 Thermal conductivity, **5**: 226
 Thermal expansion, **2**: 467
 Thermoelectric properties, **6**: 221
 Viscosity, tangential coefficient, **5**: 7
 -*Ruthenium*
 Thermoelectric properties, **6**: 221
 -*Silver*
 Absorption, index of, **5**: 250
 Elastic properties, **2**: 588
 Electrical conductivity, **6**: 161
 Equilibrium diagram, **2**: 422
 Refraction, index of, **5**: 250
 Thermal conductivity, **5**: 222
 Thermal expansion, **2**: 474
 Thermoelectric properties, **6**: 216
 -*Thallium*
 Density, **2**: 589
Platinum alloys, list of, **2**: 390
Platinum black
 Albedo, **5**: 263
 Carbon monoxide, adsorption of, by, **3**: 253
 Emission, spectral, **5**: 244
 Hydrogen, adsorption of, by, **3**: 253
 Oxygen, adsorption of, by, **3**: 253
 Photoelectric threshold, **6**: 68
Platinum cyanide, cathodoluminescence, **5**: 388
Platinum monochloride
 Decomposition pressure, **7**: 274
 Heat of formation, **5**: 189
Platinum trichloride
 Decomposition pressure, **7**: 274
 Heat of formation, **5**: 189
Platnam (alloy), **2**: 382
Plattnerite
 Density, **1**: 115
 Refractive index, **1**: 115, 168
 See also Lead dioxide.
Pleonaste, thermal expansion, **3**: 43
Plow steel, **2**: 382; *cf.* 470, 491, 492, 516, 600, 602

- Plumber's white** (alloy), **2**: 382
Plumbic bronze, **2**: 382
Plumbogummite
 Density, **1**: 137
 Refractive index, **1**: 137, 167
Plumbojarosite
 Density, **1**: 129
 Refractive index, **1**: 129, 167
Plumbo-plumbic oxide
 Free energy, **7**: 250
 Decomposition, **7**: 250
 Heat of formation, **5**: 183
 Magnetic susceptibility, **6**: 357
 Specific heat, **7**: 250
 Thermal conductivity, **5**: 217
Plumosite, density, **1**: 116
Podolite
 Density, **1**: 144
 Refractive index, **1**: 144, 171
Poggendorff cell, **6**: 318
Poise, definition, **1**: 40
Poisoning, gas, treatment of, **2**: 321
Poisson's ratio
 Definition, **1**: 40; **2**: viii
 Glass, **2**: 93
Poland, weights and measures, **1**: 10
Polar reflection, **6**: 435
Polarimetry, **2**: 334
Polarization, X-rays, **6**: 2
Polarization capacity, definition, **1**: 35
Pole effect, **5**: 432
Pole strength
 Conversion factors, **1**: 30
 Definition, **1**: 40
Polenske value, definition, **2**: xii
Polerschiefer. *See* Diatomaceous earth.
Polianite, density, **1**: 127
Pollucite
 Density, **1**: 161
 Refractive index, **1**: 161, 165
Polonium
 Electrode potential, **7**: 246
 Gold, diffusion in, **5**: 77
 Lead, diffusion in, **5**: 77
 Melting point, **1**: 104
 X-ray emission spectra, **6**: 42
Polyargyrite, density, **1**: 124
Polyarsenite
 Density, **1**: 127
 Refractive index, **1**: 127, 173
Polybasite
 Density, **1**: 124
 Photoconductivity, **6**: 66
 Refractive index, **1**: 124, 173
Polydymite, density, **1**: 131
Polyhalite
 Density, **1**: 158
 Refractive index, **1**: 158, 170
Polypeptides, optical rotatory power, **7**: 377
Poncelet, **1**: 40
Ponsard's brass, **2**: 382
Pope's Island metal, **2**: 382; *cf.* 480
Porcelain, **2**: 66
 Emission, spectral, **5**: 258
 Porosity, **2**: 68
 Thermal conductivity, **2**: 315
Porcelain, electrical
 Abrasion, resistance to, **2**: 70
 Body compositions, **2**: 67
 Classification, **2**: 67
 Compressibility, cubical, **2**: 68
 Composition, **2**: 67
 Crushing strength, **2**: 69
 Density, **2**: 68
 Dielectric constant, **2**: 72
 Dielectric strength, **2**: 71, 72
 Electrical conductivity, **2**: 71
 Electrolysis, **2**: 72
 Fixed impact and bending shock, **2**: 69
 Flash-over voltage, **2**: 72

Porcelain, electrical.—(Continued)

- Hardness, **2**: 70
 Modulus of elasticity, **2**: 69
 Modulus of rupture, **2**: 69
 Petrographic character, **2**: 68
 Softening point, **2**: 70
 Sound, velocity of, in, **2**: 72
 Thermal expansion, **2**: 70
 Thermal shock, resistance to, **2**: 70
 Toughness, **2**: 70
Porcelain, laboratory, **2**: 73
 Abrasion, resistance to, **2**: 77
 Body composition, **2**: 73
 Chemical composition, **2**: 74
 Classification, **2**: 73
 Crushing strength, **2**: 76
 Density, **2**: 75
 Dielectric constant, **2**: 80
 Dielectric strength, **2**: 81
 Electrical conductivity, **2**: 80
 Fixed impact and bending shock, **2**: 77
 Hardness, **2**: 77
 Modulus of elasticity, **2**: 76
 Modulus of rupture, **2**: 76
 Petrographic character, **2**: 74
 Porosity, **2**: 75
 Softening point, **2**: 78
 Sound, velocity of, in, **2**: 81
 Specific heat, **2**: 79
 Tensile strength, **2**: 76
 Thermal conductivity, **2**: 79
 Thermal expansion, **2**: 78
 Thermal shock, resistance to, **2**: 80
 Toughness, **2**: 77
Poro-bronze, **2**: 382, 476
Porosity
 Building materials, **2**: 53
 Clays, **2**: 58, 59
 Porcelain, **2**: 68, 75
 Refractory materials, **2**: 82
 Whiteware, **2**: 75
Porphyrite, thermal conductivity, **2**: 55
Porphyry
 Compressive strength, **2**: 47
 Porosity, **2**: 53
Portland cement, **2**: 117
 Density, **2**: 314
 Thermal conductivity, **2**: 314
Porto Rico, weights and measures, **1**: 10
Portugal, weights and measures, **1**: 10
Positive ions, **6**: 64
Potassium
 Absorption, index of, **5**: 249
 Absorption spectra, solutions, **5**: 330
 Band spectra, **5**: 415
 Boiling point, **1**: 102; **3**: 205
 Cathodoluminescence, **5**: 390
 Compressibility, **3**: 47
 Contact potential, **6**: 57
 Critical potentials, **6**: 71
 Density
 Liquid, **1**: 102; **2**: 457, 463
 Solid, **1**: 104; **2**: 456
 Electrical conductivity
 Liquid, **1**: 103
 Solid, **1**: 104; **6**: 136, 137
 Low temperature, **6**: 127, 133
 Electrode potential, **6**: 332; **7**: 306
 Emission, spectral, **5**: 253
 Emission spectra, **5**: 301
 Entropy, **5**: 88
 Free energy of electrode reaction, **7**: 306
 Hardness, **2**: 592
 Heat content, **5**: 88
 Heat of dissociation, **5**: 418
 Heat of fusion, **1**: 104; **2**: 458
 Heat of vaporization, **1**: 102
 Isotopes, **1**: 45
 Magnetic susceptibility, **6**: 355
 Magnetron number, **6**: 346
 Melting point, **1**: 104

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium.—(Continued)

- Orbits of, **1**: 50
- Persistent lines, **5**: 323
- Photoelectric sensitivity, wave length for maximum, **6**: 68
- Photoelectric threshold, **6**: 68
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 249
- Solubility in potassium hydroxide, **4**: 40
- Sound, velocity of, in vapor, **6**: 462
- Specific heat
 - Gas, **5**: 80
 - Liquid, **1**: 103; **5**: 94
 - Solid, **1**: 104; **5**: 85, 88, 93
- Spectral series, **5**: 399
- Surface tension, **4**: 440
- Thermal conductivity, **5**: 220, 221
- Thermal expansion
 - Liquid, **1**: 102; **2**: 463
 - Solid, **1**: 104; **2**: 461
- Thermochemistry, **5**: 203
- Thermodynamic potential, **5**: 88
- Thermoelectric properties, **6**: 214
- Vapor pressure, **3**: 205
- Volume change on fusion, **2**: 474
- X-radiation, scattered, distribution of, **6**: 19
- X-ray absorption limits, **6**: 36, 44
- X-ray absorption spectra, **6**: 36
- X-ray crystal structure, **1**: 340
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption coefficient, **6**: 13
- X-rays, scattering, modification by, **6**: 17
- Zeeman effect, **5**: 420
- Ammonia**
- Bismuth**
- Cadmium**
- Cesium**
- Lead**
- Lithium**
- Mercury**
- Rubidium*
 - Electrical conductivity, **6**: 192
 - Extrusion pressure, **2**: 593
 - Photoelectric sensitivity, wave length for maximum, **6**: 68
- Sodium*
 - Absorption, index of, **5**: 251
 - Density, **2**: 594
 - Electrical conductivity, **6**: 192, 198
 - Equilibrium diagram, **2**: 436
 - Photoelectric sensitivity, wave length for maximum, **6**: 68
 - Refraction, index of, **5**: 251
 - Thermal conductivity, **5**: 225
 - Thermal expansion, **2**: 474
- Thallium*
 - Electrical conductivity, **6**: 198
 - Equilibrium diagram, **2**: 436
 - Photoelectric sensitivity, wave length for maximum, **6**: 68
- Tin*
 - Electrical conductivity, **6**: 200
 - Equilibrium diagram, **2**: 417
- Zinc*
 - Equilibrium diagram, **2**: 436

Potassium acetate

- Acetic acid complexes, decomposition pressure, **7**: 307
- Boiling point elevation in aqueous solution, **3**: 326
- Density, aqueous solution, **3**: 90, 106; **7**: 76
- Diffusion in ethyl alcohol, **5**: 73
- Diffusion in methyl alcohol, **5**: 72
- Diffusion in water, **5**: 69
- Electrical conductivity, aqueous solution, **6**: 241, 252, 255
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 205

Potassium acetate.—(Continued)

- Osmotic pressure, **4**: 431
 - Refractive index, aqueous solution, **7**: 76
 - Solubility in water, **4**: 240
 - Specific heat, **5**: 101
 - Aqueous solution, **5**: 124
 - Surface tension, aqueous solution, **4**: 466
 - Vapor pressure lowering in aqueous solution, **3**: 299
 - Viscosity, aqueous solution, **5**: 18
 - Acetic acid**
 - Acetic acid**-*Calcium sulfate*
 - Butyric acid**
 - Calcium tartrate**
 - Ethyl alcohol**
 - Glycocoll**
 - Isoamyl alcohol**
 - Isobutyric acid**
 - Lead acetate**
 - Lead sulfate**
 - Methyl alcohol**
 - Phthalic acid**
 - Potassium hydrogen tartrate*
 - Freezing point-solubility in water, **4**: 374
 - Potassium sulfate*
 - Freezing point-solubility in water, **4**: 336
 - Silver acetate*
 - Solubility in water, **7**: 323
 - Sodium acetate*
 - Surface tension of aqueous solution, **4**: 470
- Potassium amalgams**, partial vapor pressure, **3**: 284
- Potassium amide**
 - Electrical conductivity, **6**: 149
- Sodium amide*
 - Freezing point-solubility, **4**: 69
- Potassium antimonate**
 - Density, aqueous solution, **3**: 89, 106
- Potassium antimonyl tartrate**
 - Boiling point elevation in aqueous solution, **3**: 326
 - Density, aqueous solution, **3**: 91, 106
 - Heat of formation, **5**: 205
 - Osmotic pressure, **4**: 431
 - Vapor pressure lowering in aqueous solution, **3**: 299
- Ethyl alcohol**
- Potassium arsenate**
 - Density, aqueous solution, **3**: 89
- Arsenic acid**
- Arsenic pentoxide**
- Sodium arsenate*
 - Freezing point-solubility, **4**: 69
- Potassium arsenite**
 - Absorption spectra, solutions, **5**: 331
- Sodium arsenite*
 - Freezing point-solubility, **4**: 69
- Potassium aurocyanide**
 - Density, aqueous solution, **3**: 91
- Potassium azide**
 - Density, aqueous solution, **3**: 89
 - Electrical conductivity, aqueous solution, **6**: 252, 254
 - Refractive index, aqueous solution, **7**: 75
 - Viscosity, aqueous solution, **5**: 17
- Iodine**
- Potassium benzenesulfonate**
 - Density, aqueous solution, **3**: 91
- Potassium benzoate**
 - Density, aqueous solution, **7**: 76
 - Heat of solution in water, **5**: 150
 - Osmotic pressure, **4**: 431
 - Refractive index, aqueous solution, **7**: 76
 - Solubility in water, **4**: 241
 - Vapor pressure lowering in aqueous solution, **3**: 299

Potassium bicarbonate

- Decomposition pressure, **7**: 308
- Density, aqueous solution, **3**: 90, 106
- Dielectric constant, aqueous solution, **6**: 104
- Electrical conductivity, aqueous solution, **6**: 255
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 205
- Osmotic pressure, **4**: 431
- Refractive index, **7**: 27
 - Aqueous solution, **7**: 75
- Solubility in water, **4**: 240
- Verdet constant, aqueous solution, **6**: 427
- Viscosity, aqueous solution, **5**: 18
- Cobaltous chloride**-*Potassium carbonate*
- Magnesium carbonate**
- Potassium carbonate*
 - Freezing point-solubility in water, **4**: 371

Potassium bisulfite

- Absorption spectra, solutions, **5**: 330
- Electrical conductivity, aqueous solution, **6**: 252
- Heat of formation, **5**: 204
- Osmotic pressure, **4**: 431
- Reflectivity, selective, **5**: 260

Potassium borate, specific heat, **5**: 101**Potassium bromate**

- Density, aqueous solution, **3**: 87, 106
- Electrical conductivity, aqueous solution, **6**: 251
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 204
- Pyroelectric effect, **6**: 210
- Solubility in water, **4**: 239
- Transference number, **6**: 310
- Vapor pressure lowering in aqueous solution, **3**: 298
- Viscosity, aqueous solution, **5**: 17
- Barium bromate**
- Phthalic acid**
- Silver bromate*
 - Solubility in water, **7**: 322
- Sodium chloride*
 - Solubility in water, **7**: 346
- Sodium nitrate*
 - Solubility in water, **7**: 346

Potassium bromide

- Absorption spectra, solutions, **5**: 330
- Ammine
 - Decomposition pressure, **7**: 306
 - Heat of decomposition, **7**: 306
 - Heat of formation, **5**: 205
- Boiling point elevation in aqueous solution, **3**: 326
- Compressibility, **3**: 50
 - Aqueous solution, **3**: 440
- Concentration cells, **6**: 329
- Density
 - Aqueous solution, **3**: 87, 106, 108; **7**: 75
 - Liquid, **3**: 24; **4**: 444
 - Solid, **1**: 154; **3**: 44
- Dielectric constant, **6**: 77, 99
- Diffusion in water, **5**: 68
- Electrical conductivity, **6**: 149, 154
 - Aqueous solution, **6**: 231, 235, 239
- Emission, spectral, **5**: 259
- Entropy, **5**: 91
- Freezing point lowering of aqueous solution, **4**: 259
- Heat content, **5**: 91
- Heat of dissociation, **5**: 418
- Heat of formation, **5**: 204
- Magnetic susceptibility, **6**: 360
- Melting point, **1**: 154
- Photoelectric current, **6**: 69

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium bromide.—(Continued)

- Refractive index, **1**: 154, 165; **7**: 13
- Aqueous solution, **7**: 75
- Residual rays, **5**: 261
- Solubility in water, **4**: 239
- Solution velocity in water, **5**: 56
- Specific heat, **5**: 91, 100
- Aqueous solution, **5**: 124
- Surface tension, **4**: 444
- Aqueous solution, **4**: 466
- Thermal conductivity, aqueous solution, **5**: 229
- Thermodynamic potential, **5**: 91
- Transference number, **6**: 309–311
- Vapor pressure, **3**: 214
- Aqueous solution, **3**: 373
- Vapor pressure lowering in aqueous solution, **3**: 298
- Verdet constant, aqueous solution, **6**: 426
- Viscosity, **7**: 212
- Aqueous solution, **5**: 17
- X-ray diffraction data, **1**: 345
- Acetone*
- Aluminum bromide*
- Ammonium chloride*
- Antimony trichloride*
- Antimony trifluoride*
- Arsenous oxide*
- Barium bromide*
- Bromine*
- Bromine*-Nitrobenzene
- Cadmium bromide*
- Cadmium bromide*-Sodium bromide
- Calcium bromide*
- Calcium sulfate*
- Cupric acetate*
- Cuprous bromide*
- Dilead potassium bromide*
- Ethyl alcohol*
- Glycerol*
- Hydrogen bromide*
- Iodine*
- Iodine*-Nitrobenzene
- Lead bromide*
- Lead chloride*
- Lithium bromide*
- Magnesium bromide*
- Manganese dioxide*
- Mercuric bromide*
- Methyl alcohol*
- Phthalic acid*
- Potassium chlorate
- Solubility in water, **7**: 345
- Potassium chloride
- Density, **3**: 135
- Aqueous solution, **3**: 99
- Electrical conductivity, **6**: 151
- Freezing point-solubility, **4**: 70
- Freezing point-solubility in water, **4**: 275, 382
- Potassium fluoride
- Freezing point-solubility, **4**: 70
- Potassium hydrogen tartrate
- Freezing point-solubility in water, **4**: 317
- Potassium hydroxide
- Freezing point-solubility, **4**: 70
- Freezing point-solubility in water, **4**: 318
- Potassium iodide
- Freezing point-solubility, **4**: 71
- Freezing point-solubility in water, **4**: 316, 387
- Silver bromide
- Freezing point-solubility, **4**: 59; **7**: 267
- Silver nitrate
- Freezing point-solubility, **4**: 59
- Sodium bromide
- Density, aqueous solution, **3**: 99
- Freezing point-solubility, **4**: 68

Potassium bromide.—(Continued)

- Strontium bromide
- Freezing point-solubility, **4**: 65
- Succinic acid
- Freezing point-solubility in water, **4**: 414
- Potassium bromochloride, electrical conductivity, **6**: 155
- Potassium bromoplatinate
- Absorption spectra, solutions, **5**: 331
- Heat of formation, **5**: 206
- Potassium bromoplatinite
- Heat of formation, **5**: 206
- Potassium butyrate
- Density, aqueous solution, **3**: 90; **7**: 76
- Refractive index, aqueous solution, **7**: 76
- Vapor pressure lowering in aqueous solution, **3**: 299
- Acetic acid*
- Butyric acid*
- Formic acid*
- Potassium d-camphorate
- Camphoric acid*
- Potassium carbonate
- Boiling point elevation in aqueous solution, **3**: 326
- Decomposition pressure, **7**: 308
- Hydrates, **7**: 308
- Density, **3**: 44
- Aqueous solution, **3**: 90, 108
- Liquid, **3**: 24
- Dielectric constant, **6**: 77
- Diffusion in water, **5**: 69
- Electrical conductivity, **6**: 149
- Aqueous solution, **6**: 252, 255
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 205
- Magnetic susceptibility, **6**: 360
- Refractive index, aqueous solution, **7**: 75
- Solubility in
- Aqueous acetone, **3**: 409
- Aqueous allyl alcohol, **3**: 406
- Aqueous ethyl alcohol, **3**: 404
- Aqueous isopropyl alcohol, **3**: 414
- Aqueous methyl alcohol, **3**: 404
- Aqueous propyl alcohol, **3**: 414
- Water, **4**: 240
- Specific heat, **5**: 101
- Aqueous solution, **5**: 124
- Surface tension, aqueous solution, **4**: 466
- Thermal conductivity, **5**: 229
- Transition temperature, **4**: 8
- Vapor pressure lowering in aqueous solution, **3**: 299
- Viscosity, aqueous solution, **5**: 18
- Acetone*
- Ammonium hydroxide*
- Barium chloride*
- Barium sulfate*
- Barium sulfate*-Potassium sulfate
- Calcium carbonate*
- Calcium carbonate*-Sodium carbonate
- Calcium chloride*
- Calcium sulfate*
- Cobaltous chloride*-Potassium bicarbonate
- Dipotassium phosphate*
- Ethyl alcohol*
- Lead chromate*
- Lithium carbonate*
- Potassium bicarbonate*
- Potassium chlorate
- Freezing point-solubility in water, **4**: 315
- Potassium chloride
- Freezing point-solubility, **4**: 70
- Freezing point-solubility in water, **4**: 300
- Potassium chromate
- Freezing point-solubility, **4**: 71

Potassium carbonate.—(Continued)

- Potassium fluoride
- Freezing point-solubility, **4**: 70
- Potassium hydrogen phosphate
- Density, aqueous solution, **3**: 100
- Potassium hydroxide
- Freezing point-solubility in water, **4**: 372
- Potassium nitrate
- Freezing point-solubility, **4**: 71
- Freezing point-solubility in water, **4**: 359
- Potassium permanganate
- Freezing point-solubility in water, **4**: 372; **7**: 346
- Potassium sulfate
- Density, aqueous solution, **3**: 100
- Freezing point-solubility, **4**: 71
- Sodium carbonate
- Density, aqueous solution, **3**: 99
- Freezing point-solubility, **4**: 69
- Freezing point-solubility in water, **4**: 373
- Viscosity, aqueous solution, **5**: 19
- Sodium carbonate-Sodium hydroxide
- Freezing point-solubility, **4**: 76
- Sodium chlorate
- Freezing point-solubility in water, **4**: 314, 386
- Sodium chloride
- Freezing point-solubility, **4**: 68
- Freezing point-solubility in water, **4**: 300, 385
- Sodium chromate
- Freezing point-solubility, **4**: 69
- Sodium nitrate
- Freezing point-solubility in water, **4**: 360, 392
- Sodium sulfate
- Freezing point-solubility in water, **4**: 335, 389
- Potassium chlorate
- Boiling point elevation in aqueous solution, **3**: 326
- Compressibility, aqueous solution, **3**: 440
- Density, **1**: 154; **3**: 43
- Aqueous solution, **3**: 86, 106
- Dielectric constant, **6**: 77
- Electrical conductivity, **6**: 149
- Aqueous solution, **6**: 241, 251
- Free energy, **7**: 306
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 204
- Magnetic susceptibility, **6**: 360
- Melting point, **1**: 154
- Osmotic pressure, **4**: 431
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 154, 169
- Solubility in water, **4**: 239
- Specific heat, **5**: 100
- Aqueous solution, **5**: 124
- Surface tension, aqueous solution, **4**: 466
- Transition temperature, **4**: 7
- Transference number, **6**: 310
- Vapor pressure, aqueous solution, **3**: 373
- Vapor pressure lowering in aqueous solution, **3**: 298
- Viscosity, aqueous solution, **5**: 17
- Volume change on melting, **4**: 12
- Calcium sulfate*
- Diethyl tartrate*
- Osmium tetroxide*
- Perchloric acid*
- Phthalic acid*
- Potassium bromide*
- Potassium carbonate*
- Potassium chloride
- Boiling point elevation in aqueous solution, **3**: 348
- Density, aqueous solution, **3**: 99

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium chlorate.—(Continued)

-Potassium hydrogen tartrate

Freezing point-solubility in water, **4**: 315

-Potassium hydroxide

Freezing point-solubility in water, **4**: 315; **7**: 345

-Potassium iodide

Solubility in water, **7**: 345

-Potassium nitrate

Freezing point-solubility in water, **4**: 314; **7**: 345

-Potassium oxalate

Solubility in water, **7**: 345

-Potassium sulfate

Solubility in water, **7**: 345

-Sodium carbonate

Freezing point-solubility in water, **4**: 314, 386

-Sodium chlorate

Freezing point-solubility, **4**: 68Freezing point-solubility in water, **4**: 315

-Sodium chloride

Vapor pressure, aqueous solution, **3**: 380

-Thallium chlorate

Freezing point-solubility in water, **4**: 315; **7**: 345

-Thallium monochloride

Solubility in water, **7**: 321**Potassium chloride**Absorption spectra, solutions, **5**: 327Activity coefficient in water, **7**: 306Adsorption by charcoal, **3**: 252Boiling point elevation in aqueous solution, **3**: 326Compressibility, **3**: 50Aqueous solution, **3**: 440Concentration cells, **6**: 328

Density

Aqueous solution, **3**: 87, 106, 108; **4**: 444; **7**: 75Liquid, **3**: 24Solid, **1**: 154; **3**: 43Dielectric constant, **6**: 77Aqueous solution, **6**: 101Diffusion in water, **5**: 68Electrical conductivity, **6**: 149, 154Aqueous solution, **6**: 231, 234, 239Emission, spectral, **5**: 259Entropy, **5**: 91Freezing mixtures, use in, **1**: 63Freezing point lowering of aqueous solution, **4**: 259Grating spaces of, **6**: 7Heat content, **5**: 91Heat of adiabatic expansion, aqueous solution, **5**: 147Heat of dilution with water, **5**: 161Heat of dissociation, **5**: 418Heat of formation, **5**: 203Heat of fusion, **5**: 131Light, transmission of, **5**: 264Magnetic rotatory power, aqueous solution, **6**: 431Magnetic susceptibility, **6**: 360Melting point, **1**: 54Photoelectric current, **6**: 69Aqueous solution, **6**: 69Radiation, transmission of, **5**: 264Refractive index, **1**: 154, 165; **7**: 13, 14, 77Aqueous solution, **7**: 75Dispersion, **7**: 101Residual rays, **5**: 261Solubility in water, **4**: 239Solution velocity in water, **5**: 56Specific heat, **5**: 91, 100Aqueous solution, **5**: 115**Potassium chloride.**—(Continued)Surface tension, **4**: 444Aqueous solution, **4**: 466Thermal conductivity, **5**: 216, 217, 231, 233Aqueous solution, **5**: 227, 229Thermodynamic potential, **5**: 91Transference number, **6**: 309–311Transmission of radiant energy, **5**: 270Vapor pressure, **3**: 214Aqueous solution, **3**: 373Vapor pressure lowering in aqueous solution, **3**: 298Verdet constant, **6**: 426Aqueous solution, **6**: 426Viscosity, **7**: 212Aqueous solution, **5**: 17X-ray diffraction data, **1**: 345X-rays, absorption coefficient, **6**: 13

-Acetone*

-Acetone*-Cupric chloride

-Acetone*-Mercuric chloride

-Aluminum chloride*

-Aluminum potassium sulfate*

-Ammonia*

-Ammonium chloride*

-Ammonium chloride*-Ammonium nitrate

-Ammonium chloride*-Cupric chloride

-Ammonium chloride*-Magnesium chloride

-Ammonium chloride*-Mercuric chloride

-Ammonium chloride*-Sodium chloride

-Ammonium nitrate*

-Ammonium nitrate*-Potassium nitrate

-Ammonium sulfate*-Sodium nitrate

-Antimony trichloride*

-Antimony trifluoride*

-Arsenous oxide*

-Barium chloride*

-Barium chloride*-Cupric chloride

-Barium chloride*-Magnesium chloride

-Barium chloride*-Sodium chloride

-Barium chloride*-Strontium chloride

-Barium hydroxide*

-Barium oxalate*

-Barium sulfate*

-Benzoic acid*

-Bismuth chloride*

-Cadmium chloride*

-Cadmium chloride*-Sodium chloride

-Calcium carbonate*

-Calcium chloride*

-Calcium chloride*-Magnesium chloride-

Sodium chloride

-Calcium chloride*-Magnesium chloride-

Sodium sulfate

-Calcium chloride*-Sodium chloride

-Calcium hydroxide*

-Calcium nitrate*

-Calcium oxalate*-Chloroacetic acid

-Calcium oxalate*-Hydrogen chloride

-Calcium sulfate*

-Calcium sulfate*-Magnesium chloride-

Sodium chloride

-Cesium chloride*

-Cobaltous chloride*

-Cupric chloride*

-Cupric chloride*-Ethyl alcohol

-Cupric sulfate*

-Cuprous chloride*

-Diethyl tartrate*

-3, 5-Dinitrobenzoic acid*

-Ethyl alcohol*

-Ethyl alcohol*-Mercuric chloride

-Ferric chloride*

-Ferrous chloride*-Magnesium chloride

-Formamide*

-Glucose*

-Glycerol*

-Glycocol*

-Hydrogen bromide*

Potassium chloride.—(Continued)

-Hydrogen chloride*

-Hydrogen chloride*-Sodium chloride

-Iodine*-Nitrobenzene

-Lead bromide*

-Lead chloride*

-Lead chloride*-Sodium chloride

-Lithium carbonate*

-Lithium chloride*

-Lithium chloride*-Sodium chloride

-Magnesium chloride*

-Magnesium chloride*-Sodium chloride

-Magnesium chloride*-Sodium sulfate

-Magnesium nitrate*-Potassium nitrate-

Strontium nitrate

-Magnesium potassium chloride*

-Magnesium sulfate*

-Magnesium sulfate*-Sodium chloride

-Manganous chloride*

-Mercuric chloride*

-Methyl alcohol*

-Phthalic acid*

-Potassium bromide*

-Potassium carbonate*

-Potassium chlorate*

-Potassium chromate

Electrical conductivity, **6**: 151Freezing point-solubility, **4**: 71

-Potassium cyanide

Freezing point-solubility, **4**: 70

-Potassium dichromate

Freezing point-solubility, **4**: 71

-Potassium fluoride

Freezing point-solubility, **4**: 70

-Potassium hydrogen tartrate

Freezing point-solubility in water, **4**: 303

-Potassium hydroxide

Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 70, 80Freezing point-solubility in water, **4**: 313

-Potassium iodide

Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 70Freezing point-solubility in water, **4**: 275, 382

-Potassium metaphosphate

Freezing point-solubility, **4**: 70

-Potassium nitrate

Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 70, 292Viscosity, aqueous solution, **5**: 19

-Potassium nitrate-Sodium chloride

Density, aqueous solution, **3**: 100

-Potassium oxalate

Freezing point-solubility in water, **4**: 303

-Potassium perchlorate

Solubility in water, **7**: 346

-Potassium permanganate

Freezing point-solubility in water, **4**: 307; **7**: 346

-Potassium phosphate

Freezing point-solubility, **4**: 70

-Potassium pyrophosphate

Freezing point-solubility, **4**: 70

-Potassium sulfate

Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 70Freezing point-solubility in water, **4**: 289

-Potassium sulfate-Sodium chloride

Density, aqueous solution, **3**: 100

-Propyl alcohol

Freezing point-solubility in water, **4**: 413

-Rubidium chloride

Freezing point-solubility, **4**: 71

Potassium chloride.—(Continued)

-Silver chloride

- Electrical conductivity, **6**: 151
Freezing point-solubility, **4**: 58
Solubility in water, **7**: 267

-Silver nitrate

- Freezing point-solubility, **4**: 59

-Sodium carbonate

- Freezing point-solubility, **4**: 69
Freezing point-solubility in water, **4**: 300, 385

-Sodium chlorate

- Freezing point-solubility, **4**: 68

-Sodium chloride

- Boiling point, **3**: 311
Boiling point elevation in aqueous solution, **3**: 348
Density, aqueous solution, **3**: 99
Electrical conductivity, **6**: 151
Freezing point-solubility, **4**: 68
Freezing point-solubility in water, **4**: 314
Refractive index, **7**: 77
Aqueous solution, **7**: 96
Thermal conductivity, aqueous solution, **5**: 229
Vapor pressure, **3**: 285
Aqueous solution, **3**: 380
Viscosity, aqueous solution, **5**: 19

-Sodium chloride-Strontium chloride

- Freezing point-solubility, **4**: 75, 82

-Sodium nitrate

- Freezing point-solubility, **4**: 291, 384

-Sodium sulfate

- Density, aqueous solution, **3**: 99
Freezing point-solubility, **4**: 69
Freezing point-solubility in water, **4**: 288, 383

-Stannous chloride

- Freezing point-solubility, **4**: 49
Freezing point-solubility in water, **4**: 303

-Strontium chloride

- Density, aqueous solution, **3**: 98
Freezing point-solubility, **4**: 65
Freezing point-solubility in water, **4**: 312

-Strontium iodide

- Freezing point-solubility in water, **4**: 275

-Strontium nitrate

- Freezing point-solubility in water, **4**: 290
Viscosity, aqueous solution, **5**: 19

-Strontium sulfate

- Solubility in water, **7**: 343

-Succinic acid

- Freezing point-solubility in water, **4**: 414

-Sulfuric acid

- Density, aqueous solution, **3**: 96

-Thallium monochloride

- Freezing point-solubility, **4**: 54; **7**: 321

-Thallous nitrate

- Freezing point-solubility in water, **4**: 290

-Thallous sulfate

- Freezing point-solubility in water, **4**: 278

-Urea

- Viscosity, aqueous solution, **5**: 24

-Zinc chloride

- Freezing point-solubility in water, **4**: 304

Potassium chloroacetate

- Density, aqueous solution, **3**: 91
Viscosity, aqueous solution, **5**: 18

-Chloroacetic acid*

-Trichloroacetic acid

- Density, aqueous solution, **3**: 103

Potassium chloroaurate

- Solubility in water, **4**: 241

Potassium chloroauride

- Heat of formation, **5**: 206
Solubility in water, **4**: 241

Potassium chloronitro-*m*-toluenesulfonate

- Solubility in water, **4**: 241

Potassium chloropalladate, heat of formation, **5**: 206**Potassium chloropalladite**, heat of formation, **5**: 206**Potassium chloroplatinate**

- Absorption spectra, solutions, **5**: 331
Density, aqueous solution, **3**: 91
Heat of formation, **5**: 206
Magnetic susceptibility, **6**: 360
Solubility in water, **4**: 241
Specific heat, **5**: 101

-Ethyl alcohol*

Potassium chloroplatinite

- Absorption spectra, solutions, **5**: 331
Density, aqueous solution, **3**: 91
Freezing point lowering of aqueous solution, **4**: 260
Heat of formation, **5**: 206
Magnetic susceptibility, **6**: 360

Potassium chlorostannate

- Density, **1**: 156
Heat of formation, **5**: 205
Refractive index, **1**: 156, 165
Specific heat, **5**: 101

Potassium chlorozincate, specific heat, **5**: 101**Potassium chromate**

- Absorption spectra, solutions, **5**: 327, 330, 331
Boiling point elevation in aqueous solution, **3**: 326
Density, **3**: 45
Aqueous solutions, **3**: 92, 106
Dielectric constant, **6**: 77
Aqueous solution, **6**: 104
Electrical conductivity, **6**: 150
Aqueous solution, **6**: 253, 255
Freezing point lowering of aqueous solution, **4**: 260
Heat of formation, **5**: 206
Heat of transition, **5**: 206
Reflectivity, selective, **5**: 260
Refractive index, aqueous solution, **7**: 76
Dispersion, **7**: 101
Solubility in water, **4**: 242
Specific heat, **5**: 101
Aqueous solution, **5**: 124
Surface tension, aqueous solution, **4**: 466
Transition temperature, **4**: 8
Vapor pressure, aqueous solution, **3**: 374
Vapor pressure lowering in aqueous solution, **3**: 299
Verdet constant, aqueous solution, **6**: 428

- Viscosity, aqueous solution, **5**: 18

See also Tarapacaita.

-Ammonium chromate*

-Ammonium sulfate*

-Chromic acid*

-Lead carbonate*

-Nickel sulfate*

-Potassium carbonate*

-Potassium chloride*

-Potassium dichromate

- Freezing point-solubility, **4**: 71

-Potassium molybdate

- Freezing point-solubility, **4**: 71
Aqueous solution, **4**: 379

-Potassium nitrate

- Freezing point-solubility, **4**: 71

-Potassium sulfate

- Density, aqueous solution, **3**: 100
Freezing point-solubility, **4**: 71
Freezing point-solubility in water, **4**: 347, 390

Potassium chromate.—(Continued)

-Potassium tungstate

- Freezing point-solubility, **4**: 71

-Sodium carbonate

- Freezing point-solubility, **4**: 69

-Sodium chromate

- Freezing point-solubility, **4**: 69, 79

Potassium chromicyanide, refractive index, **7**: 28**Potassium chromoxalate**, racemization, kinetics of, **7**: 118**Potassium citrate**

- Density, aqueous solution, **3**: 91, 106; **7**: 76
Electrical conductivity, aqueous solution, **6**: 252
Refractive index, aqueous solution, **7**: 76
Surface tension, aqueous solution, **4**: 466

Vapor pressure lowering in aqueous solution, **3**: 299

-Citric acid*

-Ethyl alcohol*

Potassium cobaltcyanide

- Freezing point lowering of aqueous solution, **4**: 260
Osmotic pressure, **4**: 431

Potassium cobaltinitrite

-Ethyl alcohol*

Potassium cobaltioxalate, photochemical decomposition, **7**: 162, 165, 169**Potassium cyanate**

- Density, aqueous solution, **3**: 91
Free energy of ionization, **7**: 307
Freezing point lowering of aqueous solution, **4**: 259
Heat of formation, **5**: 205
Magnetic susceptibility, **6**: 360
Solubility in water, **4**: 241
X-ray diffraction data, **1**: 346

-Potassium cyanide

- Freezing point-solubility, **4**: 71

Potassium cyanide

- Boiling point elevation in aqueous solution, **3**: 326
Density, aqueous solution, **3**: 91; **7**: 76
Dielectric constant, aqueous solution, **6**: 104
Free energy of ionization, **7**: 307
Electrical conductivity, aqueous solution, **6**: 252, 255
Freezing point lowering of aqueous solution, **4**: 259
Heat of formation, **5**: 205
Refractive index, aqueous solution, **7**: 76
Solubility in water, **4**: 241
Surface tension, **4**: 445
Aqueous solution, **4**: 466
X-ray diffraction data, **1**: 345

-Aurous cyanide*

-Cadmium chloride*

-Cuprous cyanide*

-Mercuric chloride*

-Potassium chloride*

-Potassium cyanate*

-Potassium iodide

- Density, aqueous solution, **3**: 100
Refractive index, aqueous solution, **7**: 96

-Silver cyanide

- Freezing point-solubility, **4**: 59
Freezing point-solubility in water, **4**: 376, 393

-Silver nitrate

- Density, aqueous solution, **3**: 98
Refractive index, aqueous solution, **7**: 96

-Sodium cyanide

- Freezing point-solubility, **4**: 69

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium cyanide.—(Continued)-*Thallium cyanide*Freezing point-solubility in water, **4**: 376-*Zinc cyanide*Freezing point-solubility, **4**: 55**Potassium α -cyanocinnamate**, electrical conductivity, aqueous solution, **6**: 253**Potassium cyanoplatinate**, solubility in water, **4**: 241**Potassium cyanoplatinite**, luminescence, **5**: 389**Potassium dibromiodide**, decomposition pressure, **7**: 306**Potassium dichloroacetate**Density, aqueous solution, **3**: 91Electrical conductivity, aqueous solution, **6**: 252-*Dichloroacetic acid**-*Hydrogen chloride**-*Lactic acid**-*Nitric acid**-*Trichloroacetic acid*Density, aqueous solution, **3**: 103**Potassium dichloriodide**, decomposition pressure, **7**: 306**Potassium dichromate**Absorption spectra, solutions, **5**: 327, 331Boiling point elevation in aqueous solution, **3**: 326Compressibility, aqueous solution, **3**: 440

Density

Aqueous solution, **3**: 92, 106Liquid, **3**: 24; **4**: 445Solid, **1**: 157Diffusion in water, **5**: 69Electrical conductivity, **6**: 150Aqueous solution, **6**: 253Freezing point lowering of aqueous solution, **4**: 260Heat of formation, **5**: 206Heat of fusion, **5**: 131Magnetic susceptibility, **6**: 360Melting point, **1**: 54, 157Reduction, kinetics of, **7**: 149Reflectivity, selective, **5**: 260Refractive index, **1**: 157, 172Aqueous solution, **7**: 76Dispersion, **7**: 102Solubility in water, **4**: 242Solution velocity in water, **5**: 56, 58

Specific heat

Liquid, **5**: 106Solid, **5**: 101Surface tension, **4**: 445Aqueous solution, **4**: 466Transition temperature, **4**: 8Vapor pressure, aqueous solution, **3**: 374Verdet constant, aqueous solution, **6**: 427, 428Viscosity, **7**: 212Aqueous solution, **5**: 18-*Calcium chloride**-*Hydrogen chloride*-*Calcium chloride**-*Nitric acid*-*Magnesium chloride**-*Potassium chloride**-*Potassium chromate**-*Potassium dimolybdate*Freezing point-solubility, **4**: 71-*Potassium sulfate*Density, aqueous solution, **3**: 100Viscosity, aqueous solution, **5**: 19-*Sulfuric acid*Density, aqueous solution, **3**: 96Viscosity, aqueous solution, **5**: 18**Potassium dihydrogen antimonate**Electrical conductivity, aqueous solution, **6**: 252**Potassium dihydrogen arsenate**Density, **1**: 155Aqueous solution, **3**: 89**Potassium dihydrogen arsenate.**—(Continued)Electrical conductivity, aqueous solution, **6**: 252Melting point, **1**: 155Refractive index, **1**: 155, 166; **7**: 27Specific heat, **5**: 101Thermal conductivity, **5**: 232Vapor pressure lowering in aqueous solution, **3**: 299-*Potassium dihydrogen phosphate*Freezing point-solubility in water, **4**: 370, 392**Potassium dihydrogen arsenite**Heat of formation, **5**: 205**Potassium dihydrogen citrate**Density, aqueous solution, **3**: 90Heat of solution in water, **5**: 150**Potassium dihydrogen diarsenate**Heat of formation, **5**: 205**Potassium dihydrogen hypophosphate**Refractive index, **1**: 155, 170**Potassium dihydrogen phosphate**Density, **1**: 155Aqueous solution, **3**: 90Electrical conductivity, aqueous solution, **6**: 252, 254Freezing point lowering of aqueous solution, **4**: 259Heat of formation, **5**: 205Melting point, **1**: 155Refractive index, **1**: 155, 166; **7**: 27Solubility in water, **4**: 240Specific heat, **5**: 101Surface tension, aqueous solution, **4**: 466Thermal conductivity, **5**: 232Vapor pressure lowering in aqueous solution, **3**: 299Viscosity, aqueous solution, **5**: 18X-ray diffraction data, **1**: 345-*Potassium dihydrogen arsenate**-*Sucrose*Density, aqueous solution, **3**: 103**Potassium dihydrogen phosphite**Density, aqueous solution, **3**: 89**Potassium dihydroxytartrate**, solubility in water, **4**: 240**Potassium dimolybdate**-*Potassium dichromate**-*Potassium ditungstate*Freezing point-solubility, **4**: 72**Potassium dinitrophenolate**-*Methyl alcohol****Potassium disilicate**, melting point, **4**: 85**Potassium dithionate**Density, **1**: 154Aqueous solution, **3**: 87Freezing point lowering of aqueous solution, **4**: 259Heat of formation, **5**: 204Optical rotatory power, **7**: 353Refractive index, **1**: 154, 166; **7**: 27Solubility in water, **4**: 240Vapor pressure lowering in aqueous solution, **3**: 298-*Barium dithionate****Potassium dititanate**, melting point, **4**: 85**Potassium ditungstate**-*Potassium dimolybdate****Potassium ethylate**-*Ethyl alcohol****Potassium ethylsulfate**Density, aqueous solution, **3**: 91; **7**: 76Refractive index, aqueous solution, **7**: 76Solubility in water, **4**: 241**Potassium ferricyanide**Absorption spectra, solutions, **5**: 327, 331Boiling point elevation in aqueous solution, **3**: 326Density, **1**: 157Aqueous solution, **3**: 92, 108**Potassium ferricyanide.**—(Continued)Diffusion in water, **5**: 69Electrical conductivity, aqueous solution, **6**: 253, 255Freezing point lowering of aqueous solution, **4**: 260Heat of formation, **5**: 206Magnetic susceptibility, **6**: 360Aqueous solution, **6**: 364Osmotic pressure, **4**: 431Refractive index, **1**: 157, 170; **7**: 28Aqueous solution, **7**: 76Dispersion, **7**: 101Solubility in water, **4**: 242Specific heat, **5**: 101Surface tension, aqueous solution, **4**: 466Verdet constant, aqueous solution, **6**: 428Viscosity, aqueous solution, **5**: 18-*Calcium sulfate****Potassium ferrioxalate**, decomposition pressure of hydrates, **7**: 309**Potassium ferrocyanide**Absorption spectra, solutions, **5**: 327, 331Compressibility, aqueous solution, **3**: 440Decomposition pressure of hydrate, **7**: 309Density, **1**: 157Aqueous solution, **3**: 92, 106Dielectric constant, aqueous solution, **6**: 104Diffusion in water, **5**: 69Electrical conductivity, aqueous solution, **6**: 253, 255Freezing point lowering of aqueous solution, **4**: 260Heat of formation, **5**: 206Magnetic susceptibility, **6**: 360Osmotic pressure, **4**: 431Refractive index, **1**: 157, 170Aqueous solution, **7**: 76Dispersion, **7**: 101Solubility in water, **4**: 242Solution velocity in water, **5**: 56, 59Specific heat, **5**: 101Surface tension, aqueous solution, **4**: 466Vapor pressure lowering in aqueous solution, **3**: 299Verdet constant, aqueous solution, **6**: 428Viscosity, aqueous solution, **5**: 18-*Calcium sulfate**-*Sodium ferrocyanide*Density, aqueous solution, **3**: 99Freezing point-solubility in water, **4**: 378**Potassium flame**Electrical properties, **6**: 156**Potassium fluoplatinate**Absorption spectra, solutions, **5**: 331**Potassium fluoride**Compressibility, **3**: 50

Density

Aqueous solution, **3**: 86, 106Liquid, **3**: 24; **4**: 444Dielectric constant, **6**: 77Electrical conductivity, **6**: 149Aqueous solution, **6**: 231, 232Freezing point lowering of aqueous solution, **4**: 259Heat of formation, **5**: 203Heat of fusion, **5**: 131

Solubility in

Aqueous acetone, **3**: 409Aqueous allyl alcohol, **3**: 406Aqueous ethyl alcohol, **3**: 404Aqueous isopropyl alcohol, **3**: 414Aqueous methyl ethyl ketone, **3**: 416Aqueous propyl alcohol, **3**: 414Water, **4**: 239

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium fluoride.—(Continued)

Specific heat, **5**: 100
 Aqueous solution, **5**: 124
 Surface tension, **4**: 444
 Vapor pressure, **3**: 214
 Vapor pressure lowering in aqueous solution, **3**: 298
 Viscosity, aqueous solution, **5**: 17
 X-ray diffraction data, **1**: 345
 -Acetone*
 -Acetone*-Methyl alcohol
 -Aluminum fluoride*
 -Barium fluoride*
 -Cerous fluoride*
 -Columbium pentafluoride*-Hydrogen fluoride
 -Ethyl alcohol*
 -Hydrogen fluoride*
 -Hydrogen fluoride*-Lead fluoride
 -Hydrogen fluoride*-Tantalum pentafluoride
 -Magnesium oxide*-Sodium fluoride
 -Phthalic acid*
 -Potassium bromide*
 -Potassium carbonate*
 -Potassium chloride*
 -Potassium hydroxide
 Freezing point-solubility, **4**: 70
 -Potassium iodide
 Freezing point-solubility, **4**: 70
 -Potassium metaphosphate
 Freezing point-solubility, **4**: 70
 -Potassium phosphate
 Freezing point-solubility, **4**: 70
 -Potassium pyrophosphate
 Freezing point-solubility, **4**: 70
 -Potassium sulfate
 Freezing point-solubility, **4**: 70
 -Sodium fluoride
 Freezing point-solubility, **4**: 67
Potassium fluosilicate
 Decomposition pressure, **7**: 308
 Heat of formation, **5**: 205
 -Ethyl alcohol*
Potassium fluostannate, solubility in water, **4**: 241
Potassium fluozirconate, solubility in water, **4**: 241
Potassium formate
 Density, aqueous solution, **3**: 90, 106; **7**: 76
 Heat of formation, **5**: 205
 Osmotic pressure, **4**: 431
 Refractive index, aqueous solution, **7**: 76
 Solubility in water, **4**: 240
 Surface tension, **4**: 466
 Vapor pressure lowering in aqueous solution, **3**: 299
 Viscosity, aqueous solution, **5**: 18
 -Acetic acid*
 -Ammonium salicylate*
 -Butyric acid*
 -Ethyl alcohol*
 -Formic acid*
 -Isobutyric acid*
 -Lactic acid*
 -Trichloroacetic acid
 Density, aqueous solution, **3**: 103
Potassium glycolate
 Density, aqueous solution, **3**: 90
 -Formic acid*
Potassium heptafluorozirconate
 Refractive index, **1**: 156, 165
Potassium heptahafnate
 Refractive index, **1**: 158, 165
Potassium heptylate
 -Ethyl alcohol*
Potassium hexafluorozirconate
 Refractive index, **1**: 156, 173

Potassium hexahafnate

Refractive index, **1**: 158, 173
Potassium hippurate
 -Hippuric acid*
Potassium hydride
 Decomposition pressure, **7**: 306
 Heat of formation, **5**: 203
 Photoelectric sensitivity, wave length for maximum, **6**: 68
Potassium hydrogen arsenite
 Heat of formation, **5**: 205
Potassium hydrogen disuccinate
 Crystallography, **1**: 323
 Density, **1**: 155
 Melting point, **1**: 155
Potassium hydrogen fluoride
 Decomposition pressure, **7**: 307
 Electrical conductivity, aqueous solution, **6**: 251
 Heat of formation, **5**: 203
 Magnetic susceptibility, **6**: 360
 -Sodium hydrogen fluoride
 Freezing point-solubility, **4**: 68
Potassium hydrogen formate
 Solubility in water, **4**: 240
Potassium hydrogen *p*-hydroxybenzoate
 -Ethyl alcohol*
Potassium hydrogen iodate
 Boiling point elevation in aqueous solution, **3**: 326
 Heat of formation, **5**: 204
Potassium hydrogen malate
 Heat of solution in water, **5**: 149
Potassium hydrogen nitrate
 Solubility in water, **4**: 240
Potassium hydrogen oxalate
 Boiling point elevation in aqueous solution, **3**: 326
 Crystallography, **1**: 323
 Density, **1**: 155
 Aqueous solution, **3**: 90
 Electrical conductivity, aqueous solution, **6**: 241, 252
 Freezing point lowering of aqueous solution, **4**: 259
 Heat of formation, **5**: 205
 Refractive index, **1**: 155, 170; **7**: 27
 Solubility in water, **4**: 240
Potassium hydrogen phosphate
 Density, aqueous solution, **3**: 89
 Electrical conductivity, aqueous solution, **6**: 252, 254
 Heat of formation, **5**: 205
 Viscosity, aqueous solution, **5**: 18
 -Potassium carbonate*
Potassium hydrogen phosphite
 Density, aqueous solution, **3**: 89
 Heat of formation, **5**: 205
Potassium hydrogen phthalate
 Electrical conductivity, aqueous solution, **6**: 241, 252
 Solubility in water, **4**: 241
Potassium hydrogen selenite
 Density, aqueous solution, **3**: 89
Potassium hydrogen succinate
 Crystallography, **1**: 323
 Density, **1**: 155
 Aqueous solution, **3**: 90
 Heat of solution in water, **5**: 148
 Refractive index, **1**: 155, 170
Potassium hydrogen sulfate
 Allotropic forms, **4**: 13
 Density, aqueous solution, **3**: 88
 Diffusion in water, **5**: 69
 Electrical conductivity, aqueous solution, **6**: 252, 254
 Heat of formation, **5**: 204
 Heat of transition, **5**: 204
 Melting point under pressure, **4**: 13, 17
 Refractive index, aqueous solution, **7**: 75
 Specific heat, **5**: 100

Potassium hydrogen sulfate.—(Continued)

Thermal expansion differences, **4**: 13
 Transition temperature, **4**: 7
 Triple points, **4**: 13
 Vapor pressure lowering in aqueous solution, **3**: 298
 Viscosity, aqueous solution, **5**: 17
 Volume change on melting, **4**: 13
 -Potassium sulfate
 Density, aqueous solution, **3**: 100
 -Silver sulfate
 Solubility in water, **7**: 326
 -Sulfuric acid
 Boiling point elevation, **3**: 328
Potassium hydrogen tartrate
 Boiling point elevation in aqueous solution, **3**: 326
 Crystallography, **1**: 323
 Density, **1**: 155
 Aqueous solution, **3**: 106
 Electrical conductivity, aqueous solution, **6**: 252
 Heat of formation, **5**: 205
 Solubility in water, **4**: 240
 Specific heat, **5**: 101
 -Ethyl alcohol*
 -Hydrogen chloride*
 -Potassium acetate*
 -Potassium bromide*
 -Potassium chlorate*
 -Potassium chloride*
 -Potassium hydrogen *L*-tartrate
 Freezing point-solubility in water, **4**: 374
 -Potassium iodide
 Freezing point-solubility in water, **4**: 319
 -Potassium nitrate
 Freezing point-solubility in water, **4**: 360
 -Potassium sulfate
 Freezing point-solubility in water, **4**: 336
 -Sodium chloride
 Freezing point-solubility in water, **4**: 303
Potassium hydrogen uroxanate
 Crystallography, **1**: 323
 Refractive index, **1**: 156, 173
Potassium hydrosulfide
 Density, aqueous solution, **3**: 88
 Dielectric constant, aqueous solution, **6**: 104
 Electrical conductivity, aqueous solution, **6**: 252
 Heat of formation, **5**: 204
 -Potassium hydroxide
 Density, aqueous solution, **3**: 88, 89
 -Potassium sulfide
 Density, aqueous solution, **3**: 100
Potassium hydroxide
 Absorption spectra, solutions, **5**: 327, 330
 Boiling point elevation in aqueous solution, **3**: 326
 Compressibility, aqueous solution, **3**: 440
 Concentration cells, **6**: 328
 Decomposition pressure of hydrates, **7**: 306
 Density
 Aqueous solution, **3**: 86, 108
 Liquid, **3**: 24
 Dielectric constant, aqueous solution, **6**: 104
 Diffusion in water, **5**: 68
 Drying agent, value as, **3**: 385
 Electrical conductivity, **6**: 149
 Aqueous solution, **6**: 251, 254
 Freezing point lowering of aqueous solution, **4**: 259

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium hydroxide.—(Continued)

- Heat of dilution with water, **5**: 161
- Heat of formation, **5**: 203
- Heat of fusion, **5**: 131
- Heat of neutralization, **5**: 212
- Heat of transition, **5**: 203
- Magnetic susceptibility, **6**: 360
- Aqueous solution, **6**: 364
- Refractive index, aqueous solution, **7**: 75
- Solubility in water, **4**: 239
- Sound, velocity of, in aqueous solution, **6**: 464
- Specific heat, aqueous solution, **5**: 115
- Surface tension, aqueous solution, **4**: 466
- Thermal conductivity, aqueous solution, **5**: 229
- Transference number, **6**: 310, 311
- Transition temperature, **4**: 7
- Vapor pressure, **3**: 214
- Aqueous solution, **3**: 373
- Vapor pressure lowering in aqueous solution, **3**: 298
- Viscosity, **7**: 212
- Aqueous solution, **5**: 17
- Arsenous acid*
- Bismuth hydroxide*
- Boric acid*
- p-Bromobenzenesulfonic acid*
- p-Bromobenzoic acid*
- Calcium sulfate*
- p-Chlorobenzoic acid*
- Chromic acid*
- Ethyl alcohol*
- Glucose*
- Iodic acid*
- Isobutyl alcohol*
- Mercuric bromide*
- Nitric acid*
- Orthophosphorous acid*
- Oxalic acid*
- Periodic acid*
- Phenol*
- Phosphoric acid*
- o-Picraminobenzoic acid*
- Potassium bromide*
- Potassium carbonate*
- Potassium chlorate*
- Potassium chloride*
- Potassium fluoride*
- Potassium hydrosulfide*
- Potassium iodate
- Freezing point-solubility in water, **4**: 321; **7**: 346
- Potassium iodide
- Freezing point-solubility, **4**: 70
- Freezing point-solubility in water, **4**: 320
- Potassium manganate
- Freezing point-solubility in water, **4**: 378, 379; **7**: 346
- Potassium sulfide
- Density, aqueous solution, **3**: 99
- Pyrophosphoric acid
- Refractive index, aqueous solution, **7**: 92
- Resorcinol
- Freezing point-solubility in water, **4**: 417
- Rubidium hydroxide
- Freezing point-solubility, **4**: 70, 80
- Silver chloride
- Solubility in water, **7**: 272
- Sodium carbonate
- Density, aqueous solution, **3**: 99
- Sodium carbonate-Sodium hydroxide
- Freezing point-solubility, **4**: 76
- Sodium hydroxide
- Density, aqueous solution, **3**: 99
- Freezing point-solubility, **4**: 67
- Viscosity, aqueous solution, **5**: 19

Potassium hydroxide.—(Continued)

- Tetramethylammonium iodide
- Freezing point-solubility in water, **4**: 319, 415; **7**: 314
- Zinc oxide
- Freezing point-solubility in water, **4**: 377
- Potassium hydroxybenzoate (*m*-, *p*-)
- Solubility in water, **4**: 241
- Potassium *p*-hydroxybenzoate
- Electrical conductivity, aqueous solution, **6**: 252
- Potassium hydroxyethylsulfonate
- Density, aqueous solution, **3**: 91
- Potassium iodate
- Absorption spectra, solutions, **5**: 330
- Boiling point elevation in aqueous solution, **3**: 326
- Density, aqueous solution, **3**: 87, 106
- Electrical conductivity, aqueous solution, **6**: 241, 252
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 204
- Solubility in water, **4**: 239
- Viscosity, aqueous solution, **5**: 17
- Barium iodate*
- Lanthanum iodate*
- Lead iodate*
- Lead nitrate*
- Phthalic acid*
- Potassium hydroxide*
- Potassium iodide
- Absorption spectra, solutions, **5**: 330
- Adsorption on silver iodide, **3**: 252
- Ammines
- Decomposition pressure, **7**: 306
- Heat of decomposition, **7**: 306
- Heat of formation, **5**: 205
- Boiling point elevation in aqueous solution, **3**: 326
- Compressibility, **3**: 50
- Aqueous solution, **3**: 440
- Concentration cells, **6**: 329
- Density
- Aqueous solution, **3**: 88, 106, 108; **7**: 75
- Liquid, **3**: 24; **4**: 444
- Solid, **1**: 154; **3**: 44
- Dielectric constant, **6**: 77, 99
- Aqueous solution, **6**: 104
- Diffusion in ethyl alcohol, **5**: 73
- Diffusion in methyl alcohol, **5**: 72
- Diffusion in water, **5**: 68
- Electrical conductivity, **6**: 149
- Aqueous solution, **6**: 231, 235, 239
- Emission, spectral, **5**: 259
- Freezing point lowering of aqueous solution, **4**: 259
- Grating spaces of, **6**: 7
- Heat of dissociation, **5**: 418
- Heat of formation, **5**: 204
- Magnetic susceptibility, **6**: 360
- Melting point, **1**: 154
- Osmotic pressure, **4**: 431
- Photoelectric current, **6**: 69
- Refractive index, **1**: 154, 165; **7**: 13
- Aqueous solution, **7**: 75
- Residual rays, **5**: 261
- Solubility in organic solvents, **4**: 205–211
- Solubility in water, **4**: 239
- Solution velocity in water, **5**: 56
- Specific heat, **5**: 100
- Aqueous solution, **5**: 124
- Surface tension, **4**: 444
- Aqueous solution, **4**: 466
- Thermal conductivity, **5**: 216, 231
- Aqueous solution, **5**: 229
- Transference number, **6**: 309, 310
- Vapor pressure, **3**: 214
- Aqueous solution, **3**: 373

Potassium iodide.—(Continued)

- Vapor pressure lowering in aqueous solution, **3**: 298
- Verdet constant, aqueous solution, **6**: 427
- Viscosity, aqueous solution, **5**: 17
- X-ray diffraction data, **1**: 345
- Acetone*
- Acetone*-Mercuric iodide
- Acetonitrile*
- Acetophenone*
- Ammonia*
- Anisaldehyde*
- Arsenous oxide*
- Aurous iodide*
- Benzaldehyde*
- Benzonitrile*
- Cadmium iodide*
- Calcium iodide*
- Calcium sulfate*
- Diethyl tartrate*
- Ethyl acetate*-Iodine
- Ethyl alcohol*
- Ethyl alcohol*-Glycerol
- Ethyl alcohol*-Iodine
- Ethyl alcohol*-Methyl alcohol
- Ethyl alcohol*-Propyl alcohol
- Ethyl bromide*-Iodine
- Ethyl cyanoacetate*
- Ethyl ether*-Mercuric iodide
- Ethylene glycol butyl ether*
- Formamide*
- Furfural*
- Glycerol*
- Glycerol*-Methyl alcohol
- Hydriodic acid*
- Hydrogen cyanide*
- Iodine*
- Iodine*-Isobutyl alcohol
- Iodine*-Methyl alcohol
- Iodine*-o-Nitroanisole
- Iodine*-Nitrobenzene
- Iodine*-Nitromethane
- Iodine*-Nitropentane
- Iodine*-o-Nitrotoluene
- Iodine*-m-Nitrotoluene
- Iodine*-Trichloronitromethane
- Lead iodide*
- Mercuric chloride*
- Mercuric iodide*
- Methyl alcohol*
- Methyl alcohol*-Propyl alcohol
- Methyl cyanoacetate*
- Methylamine*
- Nitrobenzene*
- Nitromethane*
- Phenol*
- Phthalic acid*
- Potassium bromide*
- Potassium chlorate*
- Potassium chloride*
- Potassium cyanide*
- Potassium fluoride*
- Potassium hydrogen tartrate*
- Potassium hydroxide*
- Potassium nitrate-Sodium chloride
- Density, aqueous solution, **3**: 100
- Potassium sulfate
- Freezing point-solubility, **4**: 71
- Propionitrile
- Density, **3**: 142
- Propyl alcohol
- Density, **3**: 142
- Pyridine
- Density, **3**: 142
- Salicylaldehyde
- Density, **3**: 142
- Silver iodide
- Freezing point-solubility, **4**: 59
- Freezing point-solubility in water, **4**: 320

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium iodide.—(Continued)

- Silver nitrate*
Freezing point-solubility, **4**: 59
- Sodium iodide*
Density, aqueous solution, **3**: 99
Freezing point-solubility, **4**: 68
Viscosity, aqueous solution, **5**: 19
- Strontium chloride*
Density, aqueous solution, **3**: 98
Freezing point-solubility in water, **4**: 275
- Succinic acid*
Freezing point-solubility in water, **4**: 414
- Sulfur dioxide*
Boiling point elevation, **3**: 328
Freezing point-solubility, **4**: 42, 77
Solubility, mutual, **3**: 393
- Potassium iodoplatinate**
Absorption spectra, solutions, **5**: 331
- Potassium isobutyrate**
Density, aqueous solution, **3**: 90; **7**: 76
Refractive index, aqueous solution, **7**: 76
Vapor pressure lowering in aqueous solution, **3**: 299
- Acetic acid**
- Formic acid**
- Isobutyric acid**
- Potassium lactate**
Density, aqueous solution, **3**: 90
- Dichloroacetic acid**
- Formic acid**
- Lactic acid**
- Potassium laurate**
Density, aqueous solution, **5**: 447
Viscosity, aqueous solution, **5**: 447
- Potassium linoleate**, electrical conductivity, **6**: 149
- Potassium malate**
Density, aqueous solution, **3**: 90
Heat of solution in water, **5**: 149
- Formic acid**
- Malic acid**
- Potassium malonate**
Heat of solution in water, **5**: 148
Vapor pressure lowering in aqueous solution, **3**: 299
- Potassium manganate**
Absorption spectra, solutions, **5**: 331
Decomposition pressure, **7**: 308
- Potassium hydroxide**
- Potassium mesodisilicate**
Melting point, **1**: 156
Refractive index, **1**: 156, 169
- Potassium metaarsenate**, specific heat, **5**: 101
- Potassium metabisulfite**, absorption spectra, **5**: 330
- Potassium metaborate**
Electrical conductivity, aqueous solution, **6**: 253
Freezing point lowering of aqueous solution, **4**: 260
Surface tension, **4**: 445
- Potassium metaphosphate*
Freezing point-solubility, **4**: 71
- Sodium metaborate*
Freezing point-solubility, **4**: 70
- Potassium metaphosphate**
Density, liquid, **3**: 24; **4**: 445
Electrical conductivity, aqueous solution, **6**: 252
Surface tension, **4**: 445
Transition temperature, **4**: 8
- Potassium chloride**
- Potassium fluoride**
- Potassium metaborate**
- Potassium pyrophosphate*
Freezing point-solubility, **4**: 71
- Potassium metasilicate**, melting point, **4**: 85

Potassium methanedisulfonate

- Crystallography, **1**: 323
Density, **1**: 155
Aqueous solution, **3**: 91
Refractive index, **1**: 155, 170
- Potassium methyl sulfate**
Density, aqueous solution, **3**: 91; **7**: 76
Refractive index, aqueous solution, **7**: 76
- Potassium molybdate**
Density
Aqueous solution, **3**: 92
Liquid, **3**: 24; **4**: 445
Surface tension, **4**: 445
Transition temperature, **4**: 8
Vapor pressure lowering in aqueous solution, **3**: 299
- Molybdenum trioxide**
- Potassium chromate**
- Potassium sulfate*
Freezing point-solubility, **4**: 71
Freezing point-solubility in water, **4**: 347
- Potassium tungstate*
Freezing point-solubility, **4**: 72
- Sodium molybdate*
Freezing point-solubility, **4**: 69, 79
- Potassium myristate**
Viscosity, aqueous solution, **5**: 447
- Potassium naphthalene-1, 5-disulfonate**
Crystallography, **1**: 323
Density, **1**: 155
Refractive index, **1**: 155, 172
- Potassium nickel cyanide**
Heat of formation, **5**: 206
- Potassium nitrate**
Absorption spectra, solutions, **5**: 327, 330, 331
Allotropic forms, **4**: 13
Boiling point elevation in aqueous solution, **3**: 326
Compressibility, aqueous solution, **3**: 440
Compressibility differences, **4**: 13
Density
Aqueous solution, **3**: 89, 106, 108
Liquid, **3**: 24; **4**: 444
Solid, **1**: 155; **3**: 44
Dielectric constant, **6**: 77
Diffusion in water, **5**: 69
Electrical conductivity, **6**: 149
Aqueous solution, **6**: 231, 238, 240
Freezing mixtures, use in, **1**: 63
Freezing point lowering of aqueous solution, **4**: 259
Heat of dilution with water, **5**: 162
Heat of formation, **5**: 204
Heat of fusion, **5**: 131
Heat of transition, **5**: 204
Magnetic susceptibility, **6**: 360
Melting point under pressure, **4**: 13, 17
Osmotic pressure, **4**: 431
Reflectivity, selective, **5**: 260
Refractive index, **1**: 155, 169; **7**: 27
Aqueous solution, **7**: 75
Solubility in water, **4**: 240
Sound, velocity of, in aqueous solution, **6**: 464
Specific heat
Aqueous solution, **5**: 124
Liquid, **5**: 106
Solid, **5**: 100
Surface tension, **4**: 444
Aqueous solution, **4**: 466
Thermal conductivity, aqueous solution, **5**: 229
Thermal expansion, **4**: 13
Transference number, **6**: 311
Transition temperature, **1**: 155; **3**: 44; **4**: 8
Triple points, **4**: 13

Potassium nitrate.—(Continued)

- Vapor pressure, aqueous solution, **3**: 373
Vapor pressure lowering in aqueous solution, **3**: 298
Verdet constant, aqueous solution, **6**: 427
Viscosity, **7**: 212
Aqueous solution, **5**: 18
Volume change on melting, **4**: 13
- Aluminum hydroxide**-*Ammonium hydroxide*-*Ammonium nitrate*
- Aminobenzoic acid**
- Ammonium chloride**
- Ammonium chloride**-*Ammonium nitrate*
- Ammonium nitrate**
- Ammonium nitrate**-*Ammonium sulfate*
- Ammonium nitrate**-*Potassium chloride*
- Ammonium nitrate**-*Potassium sulfate*
- Antimony trifluoride**
- Barium bromate**
- Barium iodate**
- Barium nitrate**
- Barium nitrate**-*Lead nitrate*
- Barium nitrate**-*Lithium nitrate*
- Barium nitrate**-*Sodium nitrate*
- Calcium chloride**
- Calcium nitrate**
- Calcium nitrate**-*Sodium nitrate*
- Calcium sulfate**
- Diethyl tartrate**
- 3, 5-Dinitrobenzoic acid**
- Ethyl alcohol**
- Ethyl alcohol**-*Methyl alcohol*
- Ethyl alcohol**-*Silver nitrate*
- Formamide**
- Hydrogen cyanide**
- Lead iodate**
- Lead nitrate**
- Lead nitrate**-*Sodium nitrate*
- Lithium carbonate**
- Lithium nitrate**
- Lithium nitrate**-*Sodium nitrate*
- Magnesium nitrate**
- Magnesium nitrate**-*Potassium chloride*-*Strontium nitrate*
- Magnesium nitrate**-*Sodium chloride*-*Strontium chloride*
- Nitric acid**
- Nitric acid**-*Uranyl nitrate*
- o-Nitrobenzoic acid**
- Phthalic acid**
- Potassium carbonate**
- Potassium chlorate**
- Potassium chloride**
- Potassium chloride**-*Sodium chloride*
- Potassium chromate**
- Potassium hydrogen tartrate**
- Potassium iodide**-*Sodium chloride*
- Potassium nitrite*
Freezing point-solubility, **4**: 71
- Potassium oxalate*
Freezing point-solubility in water, **4**: 360
- Potassium perchlorate*
Solubility in water, **7**: 346
- Potassium sulfate*
Density, aqueous solution, **3**: 100
Freezing point-solubility, **4**: 71
Freezing point-solubility in water, **4**: 325
- Rubidium nitrate*
Density, **3**: 135
- Silver bromate*
Solubility in water, **7**: 323
- Silver chloride*
Solubility in water, **7**: 267
- Silver nitrate*
Density, **3**: 134
Freezing point-solubility, **4**: 59

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium nitrate.—(Continued)

- Silver sulfate*
 - Density, aqueous solution, **3**: 98
 - Solubility in water, **7**: 326
 - Sodium carbonate*
 - Freezing point-solubility in water, **4**: 360
 - Sodium chlorate*
 - Freezing point-solubility, **4**: 68
 - Sodium chloride*
 - Density, aqueous solution, **3**: 99
 - Freezing point-solubility in water, **4**: 291, 384
 - Vapor pressure, aqueous solution, **3**: 380
 - Sodium chloride-Sodium nitrate*
 - Density, aqueous solution, **3**: 100
 - Sodium nitrate*
 - Density, **3**: 135
 - Aqueous solution, **3**: 99
 - Electrical conductivity, **6**: 151
 - Freezing point-solubility, **4**: 69
 - Freezing point-solubility in water, **4**: 365
 - Thermal conductivity, aqueous solution, **5**: 229
 - Viscosity, aqueous solution, **5**: 19
 - Sodium nitrate-Strontium nitrate*
 - Freezing point-solubility, **4**: 75
 - Sodium sulfate*
 - Density, aqueous solution, **3**: 99
 - Freezing point-solubility in water, **4**: 324
 - Strontium chloride*
 - Density, aqueous solution, **3**: 98
 - Freezing point-solubility in water, **4**: 290
 - Viscosity, aqueous solution, **5**: 19
 - Strontium nitrate*
 - Density, aqueous solution, **3**: 99
 - Freezing point-solubility in water, **4**: 364
 - Viscosity, aqueous solution, **5**: 19
 - Sulfuric acid*
 - Density, aqueous solution, **3**: 96
 - Thallium monochloride*
 - Freezing point-solubility in water, **4**: 290; **7**: 321
 - Thallous nitrate*
 - Density, aqueous solution, **3**: 97
 - Freezing point-solubility, **4**: 54
 - Freezing point-solubility in water, **4**: 362
- Potassium nitrite**
- Absorption spectra, solutions, **5**: 331
 - Boiling point elevation in aqueous solution, **3**: 326
 - Density, aqueous solution, **3**: 89
 - Electrical conductivity, aqueous solution, **6**: 252
 - Freezing point lowering of aqueous solution, **4**: 259
 - Heat of formation, **5**: 204
 - Melting point under pressure, **4**: 13
 - Solubility in water, **4**: 240
 - Surface tension, aqueous solution, **4**: 466
 - Vapor pressure, aqueous solution, **3**: 373
 - Vapor pressure lowering in aqueous solution, **3**: 298
 - Volume change on melting, **4**: 13
- Potassium nitrate**
 - Silver nitrite*
 - Freezing point-solubility in water, **4**: 357, 392; **7**: 323
 - Sodium nitrite*
 - Freezing point-solubility, **4**: 69
- Potassium nitrophenolates**
- Methyl alcohol**

- Potassium nitrotoluenesulfonate**
- Electrical conductivity, aqueous solution, **6**: 253
- Potassium oleate**
- Electrical conductivity, **6**: 149
 - Refractive index, **1**: 155, 173
- Ethyl alcohol**
- Potassium oxalate**
- Boiling point elevation in aqueous solution, **3**: 326
 - Crystallography, **1**: 323
 - Decomposition pressure of hydrate, **7**: 308
 - Density, **1**: 155
 - Aqueous solution, **3**: 90; **7**: 75
 - Electrical conductivity, aqueous solution, **6**: 241, 252, 255
 - Freezing point lowering of aqueous solution, **4**: 259
 - Heat of formation, **5**: 205
 - Magnetic susceptibility, **6**: 360
 - Osmotic pressure, **4**: 431
 - Photochemical oxidation, **7**: 165, 169, 170
 - Refractive index, **1**: 155, 168
 - Aqueous solution, **7**: 75
 - Solubility in water, **4**: 240
 - Specific heat, **5**: 101
 - Aqueous solution, **5**: 124
 - Vapor pressure lowering in aqueous solution, **3**: 299
 - Viscosity, aqueous solution, **5**: 18
- Ammonium oxalate**
 - Antimony trifluoride**
 - Calcium carbonate**-*Trichloroacetic acid*
 - Calcium chloride**-*Chloroacetic acid*
 - Ferric oxalate**-*Ferrous oxalate*
 - Mercuric chloride**
 - Mercuric oxalate**
 - Oxalic acid**
 - Potassium chlorate**
 - Potassium chloride**
 - Potassium nitrate**
 - Potassium sulfate*
 - Freezing point-solubility in water, **4**: 335
 - Sodium bromide*
 - Density, aqueous solution, **3**: 99
 - Sodium oxalate*
 - Freezing point-solubility in water, **4**: 372
 - Thallous oxalate*
 - Solubility in water, **7**: 322
 - Yttrium oxalate*
 - Freezing point-solubility in water, **4**: 372
- Potassium oxalodinitrodiammine cobaltate**
- Solubility in aqueous solutions, **7**: 346
- Potassium oxalotellurate**
- Solubility in water, **4**: 241
- Potassium oxide**
- Heat of formation, **5**: 203
 - Specific heat, **5**: 100
- Aluminum oxide**-*Silica*
 - Silica*
 - Freezing point-solubility, **4**: 85
 - Sulfuric acid*
 - Freezing point-solubility in water, **4**: 354, 391
- Potassium palladochloride**
- Density, aqueous solution, **3**: 91
- Potassium palmitate**
- Density, aqueous solution, **5**: 447
 - Electrical conductivity, **6**: 149
 - Refractive index, aqueous solution, **7**: 76
 - Dispersion, **7**: 101
- Ethyl alcohol**
- Potassium pentathionate**
- Density, aqueous solution, **3**: 88
 - Heat of formation, **5**: 204

- Potassium perchlorate**
- Density, aqueous solution, **3**: 86, 106
 - Electrical conductivity, aqueous solution, **6**: 241, 251
 - Freezing point-solubility data in water, **4**: 274; **7**: 345
 - Heat of formation, **5**: 204
 - Refractive index, **7**: 27
 - Solubility in water, **4**: 239
 - Specific heat, **5**: 100
 - Surface tension, aqueous solution, **4**: 466
 - Transference number, **6**: 310
 - Transition temperature, **4**: 7
 - Vapor pressure lowering in aqueous solution, **3**: 298
- Acetone**
 - Barium chloride**
 - Barium nitrate**
 - Butyl alcohol**
 - Calcium sulfate**
 - Ethyl acetate**
 - Ethyl alcohol**
 - Ethyl alcohol**-*Perchloric acid*
 - Isobutyl alcohol**
 - Methyl alcohol**
 - Methyl alcohol**-*Perchloric acid*
 - Potassium chloride**
 - Potassium permanganate**
 - Potassium nitrate**
 - Potassium sulfate*
 - Freezing point-solubility in water, **4**: 316; **7**: 346
 - Propyl alcohol*
 - Density, **3**: 142
 - Silver bromate*
 - Solubility in water, **7**: 322
 - Sodium chloride*
 - Solubility in water, **7**: 346
 - Sodium nitrate*
 - Solubility in water, **7**: 346
 - Sodium perchlorate*
 - Solubility in water, **7**: 346
 - Sodium sulfate*
 - Solubility in water, **7**: 346
- Potassium periodate**
- Density, aqueous solution, **3**: 106
 - Heat of formation, **5**: 204
 - Refractive index, **7**: 27
 - Solubility in water, **4**: 239
- Potassium permanganate**
- Absorption spectra, aqueous solution, **5**: 327, 331
 - Density, **1**: 157
 - Aqueous solution, **3**: 91
 - Electrical conductivity, aqueous solution, **6**: 253
 - Freezing point lowering of aqueous solution, **4**: 260
 - Heat of formation, **5**: 206
 - Magnetic susceptibility, **6**: 360
 - Refractive index, **1**: 157, 167
 - Solubility in water, **4**: 241
 - Surface tension, aqueous solution, **4**: 466
 - Transference number, **6**: 309
- Ammonium hydrogen phosphate**
 - Potassium carbonate**
 - Potassium chloride**
 - Potassium chromate**
 - Potassium perchlorate*
 - Freezing point-solubility in water, **4**: 316
 - Potassium sulfate*
 - Density, aqueous solution, **3**: 100
 - Freezing point-solubility in water, **4**: 343; **7**: 346
 - Rubidium manganate*
 - Freezing point-solubility in water, **4**: 378

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium permanganate.—(Continued)

- Sodium sulfate*
 - Density, aqueous solution, **3**: 99
 - Freezing point-solubility in water, **4**: 342; **7**: 346
- Potassium peroxide**
 - Heat of formation, **5**: 203
- Potassium persulfate**
 - Absorption spectra, solutions, **5**: 330
 - Decomposition, kinetics of, **7**: 148
 - Density, aqueous solution, **3**: 88
 - Electrical conductivity, aqueous solution, **6**: 252
 - Heat of formation, **5**: 204
 - Magnetic susceptibility, **6**: 360
 - Refractive index, **1**: 154, 168
- Potassium 2, 4-phenoldisulfonate**
 - Crystallography, **1**: 323
 - Refractive index, **1**: 155, 171
- Potassium o-phenolsulfonate**
 - Crystallography, **1**: 323
 - Density, **1**: 155
 - Refractive index, **1**: 155, 170; **7**: 28
- Potassium p-phenolsulfonate**
 - Crystallography, **1**: 323
 - Density, **1**: 155
 - Refractive index, **1**: 155, 171; **7**: 27
- Potassium phosphate**
 - Density, aqueous solution, **3**: 89
 - Electrical conductivity, aqueous solution, **6**: 252
 - Heat of formation, **5**: 205
 - Solubility in water, **4**: 240
 - Surface tension, aqueous solution, **4**: 466
 - Viscosity, aqueous solution, **5**: 18
 - Phosphoric acid**
 - Potassium chloride**
 - Potassium fluoride**
- Potassium phthalate**, electrical conductivity, aqueous solution, **6**: 241, 252
- Potassium picrate**
 - Crystallography, **1**: 323
 - Density, **1**: 156
 - Electrical conductivity, aqueous solution, **6**: 241, 252
 - Heat of solution in water, **5**: 149
 - Refractive index, **1**: 156, 173; **7**: 28
 - Solubility in water, **4**: 241
 - Acetone**
 - Ethyl alcohol**
 - Methyl alcohol**
- Potassium platinocyanide**
 - Lithium platinocyanide**
- Potassium platonitritooxalate**
 - Refractive index, **7**: 28
- Potassium propionate**
 - Density, aqueous solution, **3**: 90; **7**: 76
 - Heat of solution in water, **5**: 148
 - Osmotic pressure, **4**: 431
 - Refractive index, aqueous solution, **7**: 76
 - Vapor pressure lowering in aqueous solution, **3**: 299
 - Viscosity, aqueous solution, **5**: 18
 - Formic acid**
 - Propionic acid*
 - Density, aqueous solution, **3**: 103
- Potassium pyroantimonate**
 - Density, aqueous solution, **3**: 89
- Potassium pyroarsenate**
 - Sodium pyroarsenate*
 - Freezing point-solubility, **4**: 69, 79
- Potassium pyrophosphate**
 - Reflectivity, selective, **5**: 260
 - Specific heat, **5**: 101
 - Transition temperature, **4**: 8
 - Dipotassium dihydrogen disulfate**
 - Potassium chloride**
 - Potassium fluoride**
 - Potassium metaphosphate**

Potassium pyrophosphate.—(Continued)

- Sodium pyrophosphate*
 - Freezing point-solubility, **4**: 69
- Potassium pyrosulfate**
 - Density, aqueous solution, **3**: 87
 - Heat of formation, **5**: 204
 - Sulfuric acid*
 - Boiling point elevation, **3**: 328
- Potassium pyrosulfite**
 - Absorption spectra, solutions, **5**: 330
 - Freezing point lowering of aqueous solution, **4**: 259
 - Solubility in water, **4**: 240
- Potassium rhodium cyanide**
 - Refractive index, **1**: 157, 170
- Potassium rhodium trioxalate**
 - Optical rotatory power, **7**: 354
- Potassium ruthenium cyanide**
 - Refractive index, **1**: 157, 171
- Potassium salicylate**
 - Solubility in water, **4**: 241
 - Ethyl alcohol**
- Potassium salts**, radioactivity, **1**: 372
- Potassium selenate**
 - Density, **1**: 155
 - Aqueous solution, **3**: 89
 - Reflectivity, selective, **5**: 260
 - Refractive index, **1**: 155, 170; **7**: 27
 - Solubility in water, **4**: 240
 - Selenic acid*
 - Density, aqueous solution, **3**: 96
- Potassium selenide**
 - Heat of formation, **5**: 204
- Potassium selenite**
 - Density, aqueous solution, **3**: 89
- Potassium selenocyanate**
 - Density, aqueous solution, **3**: 91
- Potassium silicate**
 - Dehydration behavior, **7**: 312
 - Density, aqueous solution, **3**: 91
 - Freezing point lowering of aqueous solution, **4**: 260
 - Vapor pressure, aqueous solution, **3**: 379, 384
- Potassium silicomolybdate**
 - Density, aqueous solution, **3**: 92
 - Optical rotatory power, **7**: 354
- Potassium silicotungstate**
 - Optical rotatory power, **7**: 354
- Potassium silver cyanide**
 - Concentration cells, **6**: 329
 - Density, aqueous solution, **3**: 91
 - Heat of formation, **5**: 206
- Potassium silver iodide**
 - Heat of formation, **5**: 206
- Potassium sodium carbonate**
 - Density, aqueous solution, **3**: 106
 - Solubility in water, **4**: 242
- Potassium sodium cyanoplatinite**
 - Luminescence, **5**: 389
- Potassium sodium nitrate**
 - Specific heat, aqueous solution, **5**: 124
- Potassium sodium sulfite**
 - Electrical conductivity, aqueous solution, **6**: 253
- Potassium sodium tartrate**
 - Boiling point elevation in aqueous solution, **3**: 326
 - Decomposition pressure of hydrate, **7**: 307
 - Density, aqueous solution, **3**: 92, 106
 - Freezing point lowering of aqueous solution, **4**: 260
 - Heat of formation, **5**: 206
 - Heat of solution in water, **5**: 149
 - Refractive index, **7**: 28
 - Solubility in water, **4**: 242
 - Specific heat, **5**: 101
 - Vapor pressure, aqueous solution, **3**: 374
 - Viscosity, aqueous solution, **5**: 18
 - See also Rochelle salt.
 - Ethyl alcohol**

Potassium sodium thiocyanate

- Heat of formation, **5**: 206
- Potassium stannate**
 - Density, aqueous solution, **3**: 91, 106
 - Solubility in water, **4**: 241
- Potassium stearate**
 - Density, aqueous solution, **5**: 447
 - Electrical conductivity, **6**: 150
 - Viscosity, aqueous solution, **5**: 447
- Potassium strontium sulfate**
 - Heat of formation, **5**: 206
 - Transition temperature, **4**: 8
- Potassium succinate**
 - Density, aqueous solution, **3**: 90; **7**: 76
 - Heat of solution in water, **5**: 149
 - Refractive index, aqueous solution, **7**: 76
 - Vapor pressure lowering in aqueous solution, **3**: 299
 - Formic acid**
 - Succinic acid*
 - Density, aqueous solution, **3**: 103
- Potassium sulfantimonate**
 - Solubility in water, **4**: 240
- Potassium sulfate**
 - Absorption spectra, solutions, **5**: 330
 - Boiling point elevation in aqueous solution, **3**: 326
 - Compressibility, aqueous solution; **3**: 440
 - Concentration cell, **6**: 329
 - Density
 - Aqueous solution, **3**: 88, 106, 108; **4**: 444; **7**: 75
 - Liquid, **3**: 24
 - Solid, **1**: 154; **3**: 44
 - Dielectric constant, **6**: 77, 100
 - Diffusion in water, **5**: 68
 - Electrical conductivity, **6**: 149
 - Aqueous solution, **6**: 231, 237
 - Freezing mixtures, use in, **1**: 63
 - Freezing point lowering of aqueous solution, **4**: 259
 - Heat of formation, **5**: 204
 - Heat of transition, **5**: 204
 - Inversion point, **1**: 54
 - Magnetic susceptibility, **6**: 360
 - Melting point, **1**: 54, 154
 - Osmotic pressure, **4**: 431
 - Photoelectric current, aqueous solution, **6**: 69
 - Reflectivity, selective, **5**: 260
 - Refractive index, **1**: 154, 169; **7**: 27
 - Aqueous solution, **7**: 75
 - Solubility in water, **4**: 239
 - Solution velocity in water, **5**: 56, 58
 - Specific heat, **5**: 100
 - Aqueous solution, **5**: 124
 - Surface tension, **4**: 444
 - Aqueous solution, **4**: 466
 - Thermal conductivity, aqueous solution, **5**: 229
 - Thermal expansion, **3**: 44
 - Transference number, **6**: 310, 311
 - Transition temperature, **1**: 154; **4**: 7
 - Vapor pressure, aqueous solution, **3**: 373
 - Vapor pressure lowering in aqueous solution, **3**: 298
 - Viscosity, aqueous solution, **5**: 17
 - X-ray diffraction data, **1**: 345
 - Acetone**
 - Aluminum sulfate**
 - Aluminum sulfate**-*Thallium sulfate*
 - Ammonia**
 - Ammonium chloride**
 - Ammonium chloride**-*Cupric sulfate*
 - Ammonium chromate**
 - Ammonium nitrate**
 - Ammonium nitrate**-*Potassium nitrate*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium sulfate.—(Continued)

- Ammonium sulfate*
- Ammonium sulfate*-Cupric sulfate
- Ammonium sulfate*-Magnesium sulfate
- Barium carbonate*
- Barium sulfate*
- Barium sulfate*-Potassium carbonate
- Beryllium sulfate*
- Cadmium sulfate*
- Calcium acetate*-Sodium sulfate
- Calcium acetate*-Sulfuric acid
- Calcium bromide*
- Calcium carbonate*
- Calcium chlorate*
- Calcium chloride*
- Calcium chloride*-Sodium sulfate
- Calcium chloride*-Sulfuric acid
- Calcium ferricyanide*
- Calcium ferrocyanide*
- Calcium hydroxide*
- Calcium iodide*-Sodium sulfate
- Calcium nitrate*
- Calcium nitrate*-Sulfuric acid
- Calcium phosphate*-Sulfuric acid
- Calcium sulfate*
- Calcium sulfate*-Magnesium sulfate
- Calcium sulfate*-Silver sulfate
- Calcium sulfate*-Sodium sulfate
- Calcium sulfate*-Sulfuric acid
- Ceric sulfate*
- Chloral hydrate*
- Chromic sulfate*
- Cobaltous sulfate*
- Cupric chloride*
- Cupric sulfate*
- Ethyl alcohol*
- Ethylene glycol*
- Ferric sulfate*
- Ferrous sulfate*
- Formic acid*
- Glycerol*
- Hydrogen chloride*
- Hydrogen peroxide*
- Lanthanum sulfate*
- Lead acetate*
- Lead sulfate*
- Lithium carbonate*
- Lithium sulfate*
- Magnesium chloride*
- Magnesium sulfate*
- Magnesium sulfate*-Sodium sulfate
- Manganous sulfate*
- Mannitol*
- Nickel sulfate*
- Nitric acid*
- Phthalic acid*
- Potassium acetate*
- Potassium carbonate*
- Potassium chlorate*
- Potassium chloride*
- Potassium chloride*-Sodium chloride
- Potassium chromate*
- Potassium dichromate*
- Potassium fluoride*
- Potassium hydrogen sulfate*
- Potassium hydrogen tartrate*
- Potassium iodide*
- Potassium manganate*
- Potassium molybdate*
- Potassium nitrate*
- Potassium oxalate*
- Potassium perchlorate*
- Potassium tungstate
- Freezing point-solubility, **4: 71**
- Pyridine
- Freezing point-solubility in water, **4: 416**
- Silver bromate
- Solubility in water, **7: 323**
- Silver sulfate
- Density, aqueous solution, **3: 98**

-Silver sulfate.—(Continued)

- Freezing point-solubility, **4: 59, 79**
- Freezing point-solubility in water, **4: 341; 7: 326**
- Sodium carbonate
- Freezing point-solubility in water, **4: 335**
- Sodium chloride
- Density, aqueous solution, **3: 99**
- Freezing point-solubility, **4: 68**
- Freezing point-solubility in water, **4: 288, 383**
- Sodium manganate
- Freezing point-solubility in water, **4: 342**
- Sodium nitrate
- Density, aqueous solution, **3: 99**
- Freezing point-solubility in water, **4: 324, 387**
- Sodium sulfate
- Density, aqueous solution, **3: 99**
- Freezing point-solubility, **4: 69, 79**
- Freezing point-solubility in water, **4: 354**
- Viscosity, aqueous solution, **5: 19**
- Strontium sulfate
- Freezing point-solubility, **4: 65**
- Sucrose
- Freezing point-solubility in water, **4: 422**
- Sulfuric acid
- Boiling point elevation, **3: 328**
- Density, aqueous solution, **3: 96**
- Freezing point-solubility, **4: 43**
- Thallium monochloride
- Freezing point-solubility in water, **4: 278; 7: 321**
- Thorium sulfate
- Freezing point-solubility in water, **4: 336**
- Zinc sulfate
- Density, aqueous solution, **3: 98**
- Freezing point-solubility in water, **4: 339**
- Surface tension, aqueous solution, **4: 470**

Potassium sulfide

- Heat of formation, **5: 204**
- Electrical conductivity, aqueous solution, **6: 252, 254**
- Melting point under pressure, **4: 12**
- Transition temperature, **4: 7**
- Volume change on melting, **4: 13**
- Potassium hydrosulfide*
- Potassium hydroxide*

Potassium sulfite

- Compressibility, aqueous solution, **3: 440**
- Density, aqueous solution, **3: 87**
- Diffusion in water, **5: 68**
- Electrical conductivity, aqueous solution, **6: 252**
- Freezing point lowering of aqueous solution, **4: 259**
- Heat of formation, **5: 204**
- Solubility in water, **4: 239**

Potassium tartrate

- Boiling point elevation in aqueous solution, **3: 326**
- Crystallography, **1: 323**
- Decomposition pressure of hydrate, **7: 308**
- Density, **1: 155**
- Aqueous solution, **3: 91; 7: 76**
- Freezing point lowering of aqueous solution, **4: 259**
- Heat of formation, **5: 205**
- Heat of solution in water, **5: 149**
- Magnetic susceptibility, **6: 360**
- Osmotic pressure, **4: 431**
- Pyroelectric constant, **6: 210, 212**

Potassium tartrate.—(Continued)

- Refractive index, **1: 155, 170**
- Aqueous solution, **7: 76**
- Specific heat, **5: 101**
- Surface tension, aqueous solution, **4: 466**
- Vapor pressure, aqueous solution, **3: 373**
- Vapor pressure lowering in aqueous solution, **3: 299**
- Viscosity, aqueous solution, **5: 18**
- Acetic acid*-Calcium acetate
- Antimony trifluoride*
- Calcium acetate*-Hydrogen chloride
- Calcium chloride*-Chloroacetic acid
- Calcium tartrate*
- Ethyl alcohol*
- Sodium tartrate
- Freezing point-solubility in water, **4: 375, 376**
- Potassium tellurate**
- Heat of formation, **5: 204**
- Solubility in water, **4: 240**
- Potassium tellurite**
- Heat of formation, **5: 204**
- Density, aqueous solution, **3: 89**
- Potassium tetraborate**
- Electrical conductivity, aqueous solution, **6: 253**
- Freezing point lowering of aqueous solution, **4: 260**
- Specific heat, **5: 101**
- Potassium tetraoxalate**
- Crystallography, **1: 323**
- Density, **1: 155**
- Aqueous solution, **3: 90**
- Refractive index, **1: 155, 169**
- Solubility in water, **4: 240**
- Potassium tetrasulfide**
- Heat of formation, **5: 204**
- Potassium tetrasulfoniodide**
- Decomposition pressure, **7: 306**
- Heat of decomposition, **7: 306**
- Potassium tetrathionate**
- Density, aqueous solution, **3: 88**
- Heat of formation, **5: 204**
- Magnetic susceptibility, **6: 360**
- Phosphorus tetrithiosulfide**
- Verdet constant, **6: 426**
- Potassium thallium chloride**
- Heat of formation, **5: 205**
- Potassium thiocyanate**
- Allotropic forms, **4: 13**
- Density, aqueous solution, **3: 91**
- Electrical conductivity, aqueous solution, **6: 241, 253, 255**
- Freezing mixtures, use in, **1: 63**
- Freezing point lowering of aqueous solution, **4: 260**
- Heat of formation, **5: 205**
- Melting point under pressure, **4: 13**
- Refractive index, aqueous solution, **7: 76**
- Solubility in water, **4: 241**
- Sulfur dioxide complex
- Decomposition pressure, **7: 307**
- Heat of decomposition, **7: 307**
- Transition temperature, **4: 8**
- Vapor pressure lowering in aqueous solution, **3: 299**
- Viscosity, aqueous solution, **5: 18**
- Volume change on melting, **4: 13**
- Acetone*
- Acetone*-Ethyl alcohol
- Acetone*-Methyl alcohol
- Benzoic acid*
- Diethyl tartrate*
- Ethyl alcohol*
- Ethyl alcohol*-Methyl alcohol
- Formamide*
- Methyl acetate*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Potassium thiocyanate.—(Continued)

- Methyl alcohol*
- Pyridine
 - Freezing point-solubility, **4**: 213
- Rubidium thiocyanate
 - Freezing point-solubility, **4**: 71, 80
- Silver bromide
 - Solubility in water, **7**: 271
- Silver iodide
 - Solubility in water, **7**: 271
- Silver thiocyanate
 - Freezing point-solubility in water, **4**: 377; **7**: 271
- Sodium thiocyanate
 - Freezing point-solubility, **4**: 69
- Sulfur dioxide
 - Boiling point elevation, **3**: 328
- Thallium thiocyanate
 - Solubility in water, **7**: 322
- Potassium thiosulfate**
 - Heat of formation, **5**: 204
 - Solubility in water, **4**: 239
 - Specific heat, **5**: 100
 - Vapor pressure lowering in aqueous solution, **3**: 298
- Potassium trichloroacetate**
 - Density, aqueous solution, **3**: 91
 - Electrical conductivity, aqueous solution, **6**: 252
 - Viscosity, aqueous solution, **5**: 18
- Chloroacetic acid*
- Trichloroacetic acid
 - Density, aqueous solution, **3**: 103
- Potassium trichromate**
 - Heat of formation, **5**: 206
- Potassium trihydrogen dioxalate**
 - Boiling point elevation in aqueous solution, **3**: 326
- Potassium triiodide**, electrical conductivity, aqueous solution, **6**: 235
- Potassium trioxalocobaltate**
 - Solubility in water, **4**: 242
- Potassium trioxide**
 - Heat of formation, **5**: 203
- Potassium trisulfonate**
 - Density, **1**: 154
 - Refractive index, **1**: 154, 168
- Potassium trithionate**
 - Density, aqueous solution, **3**: 88
 - Heat of formation, **5**: 204
 - Refractive index, **7**: 27
- Potassium tungstate**
 - Density
 - Aqueous solution, **3**: 92
 - Liquid, **3**: 24; **4**: 445
 - Surface tension, **4**: 445
 - Transition temperature, **4**: 8
 - Vapor pressure lowering in aqueous solution, **3**: 299
- Potassium chromate*
- Potassium molybdate*
- Potassium sulfate*
- Sodium tungstate
 - Freezing point-solubility, **4**: 69, 80
- Tungsten oxide
 - Freezing point-solubility, **4**: 61
- Potassium tungsten enneachloride**
 - Electrical conductivity, aqueous solution, **6**: 234
- Potassium uranyl sulfate**
 - Refractive index, **7**: 28
- Potassium valerate**, vapor pressure lowering in aqueous solution, **3**: 299
- Potassium vanadate**
 - Density, aqueous solution, **3**: 92
- Potassium zinc cyanide**
 - Heat of formation, **5**: 205
 - Refractive index, **1**: 156, 165
 - Specific heat, **5**: 101

Potassium zinc selenate

- Density, **1**: 156
- Refractive index, **1**: 156, 169; **7**: 31
- Potassium zinc sulfate**
 - Density, **1**: 156; **3**: 44
 - Aqueous solution, **3**: 91
 - Heat of formation, **5**: 205
- Hydrate
 - Decomposition pressure, **7**: 308
 - Heat of decomposition, **7**: 308
- Refractive index, **1**: 156, 168; **7**: 31
- Solubility in water, **4**: 241
- Specific heat, **5**: 101
- Pot metal**, **2**: 382, 567
- Potential**, definition, **1**: 40
- Potential**, critical. See Critical potentials.
- Potential**, ionization. See Critical potentials.
- Potential**, resonance. See Critical potentials.
- Potential gradient**
 - Conversion factors, **1**: 27
 - Definition, **1**: 40
- Potentials**
 - Electrochemical reactions, **6**: 332
 - Liquid junction, **6**: 338
 - Oxidation-reduction, **6**: 333
- Poterie d'étain** (alloy), **2**: 382; cf. 476
- Potingris** (alloy), **2**: 382
- Potinjaune** (alloy), **2**: 382
- Potosi silver**, **2**: 382
- Poundal**, definition, **1**: 40
- Powellite**
 - Density, **1**: 145
 - Refractive index, **1**: 145, 167
- See also Calcium molybdate.
- Power**
 - Conversion factors, **1**: 25
 - Definition, **1**: 40
- Praseodymium**
 - Cathodoluminescence, **5**: 388, 390
 - Density, **1**: 104; **2**: 456
 - Electrical conductivity, **1**: 104; **6**: 153
 - Emission spectra, **5**: 310
 - Hardness, **2**: 592
 - Isotopes, **1**: 47
 - Magnetic susceptibility, **6**: 355
 - Melting point, **1**: 104
 - Persistent lines, **5**: 324
 - Specific heat, **1**: 104
 - Thermochemistry, **5**: 194
 - X-ray absorption limits, **6**: 39
 - X-ray emission spectra, **6**: 39
 - X-ray series, limiting frequencies, **6**: 35
- Praseodymium bromate**
 - Solubility in water, **4**: 228
- Praseodymium chloride**
 - Absorption spectra, solutions, **5**: 328
 - Density, **3**: 43
 - Aqueous solution, **3**: 105
 - Electrical conductivity, **6**: 149
 - Aqueous solution, **6**: 233
 - Heat of formation, **5**: 194
 - Magnetic susceptibility, **6**: 359
 - Solubility in water, **4**: 227
- Ethyl alcohol*
- Hydrogen chloride*
- Praseodymium dioxide**
 - Heat of formation, **5**: 194
- Praseodymium ethyl sulfate**
 - Density, **1**: 139
 - Refractive index, **1**: 139, 166
- Praseodymium molybdate**
 - Refractive index, **7**: 23
- Lead molybdate*
- Praseodymium nitrate**
 - Absorption spectra, solutions, **5**: 328
 - Freezing point lowering of aqueous solution, **4**: 257
 - Heat of formation, **5**: 194
- Cobaltous nitrate*

Praseodymium nitrate.—(Continued)

- Ethyl alcohol*
- Magnesium nitrate*
- Manganous nitrate*
- Nickel nitrate*
- Nitric acid*
- Zinc nitrate
 - Freezing point-solubility in water, **4**: 362
- Praseodymium oxalate**
 - Electrical conductivity, aqueous solution, **6**: 258
 - Solubility in aqueous solutions, **7**: 339
- Praseodymium sulfate**
 - Absorption spectra, solutions, **5**: 328
 - Decomposition pressure, **7**: 290
 - Density, **1**: 139
 - Electrical conductivity, aqueous solution, **6**: 236
 - Magnetic susceptibility, **6**: 359
 - Refractive index, **1**: 139, 170; **7**: 23
 - Solubility in water, **4**: 227
- Praseodymium trioxide**
 - Heat of formation, **5**: 194
 - Magnetic susceptibility, **6**: 359
- Precipitation laws**, colloids, **1**: 354
- Prehnite**
 - Density, **1**: 145
 - Pyroelectric effect, **6**: 210
 - Refractive index, **1**: 145, 171
- Pressboard**
 - Dielectric constant, **2**: 310
 - Dielectric strength, **2**: 310
 - Electrical conductivity, **2**: 310
 - Moisture content at various humidities, **2**: 323
 - Thermal conductivity, **2**: 311, 315
- Presspan**. See Pressboard.
- Pressure**
 - Conversion factors, **1**: 24
 - Definition, **1**: 40
- Presto steel**, **2**: 382
- Preuss' alloy**, **2**: 382
- Priceite**
 - Density, **1**: 145
 - Refractive index, **1**: 145, 171
- Primary cells**, **6**: 312
- Primer gilding** (alloy), **2**: 382; cf. 469, 555
- Prince's metal**, **2**: 382; cf. 555, 557, 601
- Printing industry**, air conditioning in, **2**: 322
- Projectile steel**, **2**: 382, 507
- Prolectite**
 - Density, **1**: 142
 - Refractive index, **1**: 142, 172
- Proline**, optical rotatory power, **7**: 408
- Promethium** (alloy), **2**: 382; cf. 556
- Propane**
 - Boiling point, **1**: 61; **3**: 218
 - Critical point data, **3**: 248
 - Density, **3**: 3, 28
 - Electrical ignition, **2**: 175
 - Flame propagation in, **2**: 184
 - Heat of combustion, **5**: 163
 - Heat of vaporization, **5**: 137
 - Ignition temperature, **2**: 174
 - Inflammability, limits of, **2**: 179
 - Ionization by α -particles, **6**: 122
 - Polarization of light scattered by, **5**: 265
 - Solidification point, **1**: 61
 - Solubility in non-aqueous liquids, **3**: 269
 - Solubility in water, **3**: 260
 - Specific heat, **5**: 80, 108
 - Vapor pressure, **3**: 218
- Methyl alcohol*
- Propargyl alcohol**
 - Heat of combustion, **5**: 164
 - Refractive index, **7**: 35
- Propargyl ethyl ether**
 - Isoamyl acetate*
- Propeller bushing** (alloy), **2**: 382

* Data for system will be found under this compound in Index. Full explanation on page vii.

Propellers

- Characteristics, **1**: 411
- Pitch ratio, **1**: 403

Propionaldehyde

- Absorption spectra, **5**: 331, 336, 365, 374
- Dielectric constant, **6**: 85
- Electrical conductivity, **6**: 143
- Heat of solution in water, **5**: 148
- Magnetic susceptibility, **6**: 361
- Refractive index, **7**: 35
- Solubility in water, **3**: 387
- Sound, velocity of, in vapor, **6**: 463
- Specific heat, **5**: 108
- Surface tension, aqueous solution, **4**: 467
- Verdet constant, **6**: 428
- Viscosity, **7**: 214

Propionaldoxime, surface tension, 4: 450**Propionamide**

- Absorption spectra, **5**: 336, 379
- Boiling point elevation in aqueous solution, **3**: 327
- Density, **3**: 28
- Aqueous solution, **3**: 114
- Heat of combustion, **5**: 167
- Heat of solution in water, **5**: 148
- Surface tension, **4**: 450
- Viscosity, **7**: 214
- Aqueous solution, **5**: 23

-Acetone***-Benzene*****-Chloroform*****-Ethyl alcohol*****-Ethyl ether*****-Pyridine**

Density, **3**: 164

Viscosity, **5**: 40

Propionanilide, heat of combustion, 5: 168**Propionic acid**

- Absorption spectra, **5**: 331, 336, 376, 379
- Azeotropic mixtures, **3**: 318-320
- Birefringence, electric, **7**: 111
- Boiling point, **3**: 218, 339
- Condensation on ions and nuclei, **6**: 117
- Critical point data, **3**: 239, 248
- Density, **3**: 31
- Aqueous solution, **3**: 112, 113; **7**: 68
- Dielectric constant, **6**: 86
- Aqueous solution, **6**: 101
- Diffusion in methyl alcohol, **5**: 72
- Diffusion in water, **5**: 70
- Diffusion of vapor in gases, **5**: 62
- Electrical conductivity, **6**: 143
- Aqueous solution, **6**: 264
- Esterification constant, **7**: 138
- Freezing point lowering of aqueous solution, **4**: 262
- Heat of combustion, **5**: 165
- Heat of solution in water, **5**: 148, 159
- Heat of vaporization, **5**: 137
- Magnetic susceptibility, **6**: 361
- Orthobaric density, **3**: 239
- Polarization of light scattered by, **5**: 266
- Refractive index
- Aqueous solution, **7**: 68
- Liquid, **7**: 35
- Sound, velocity of, in vapor, **6**: 463
- Specific heat
- Aqueous solution, **5**: 124
- Liquid, **5**: 108
- Solid, **5**: 102
- Surface tension, **4**: 450
- Aqueous solution, **4**: 467
- Thermal conductivity, **5**: 228
- Vapor pressure, **3**: 218
- Aqueous solution, **3**: 290
- Verdet constant, dispersion of, **6**: 434
- Viscosity
- Aqueous solution, **5**: 20
- Liquid, **5**: 33; **7**: 214
- X-rays, absorption coefficient, **6**: 14, 16
- Acetic acid*

Propionic acid.—(Continued)

- Ammonium propionate*
- Benzanilide*
- Benzene*
- Benzil*
- Benzophenone*
- Camphor*
- Chloroform*
- Cupric propionate*
- Diphenylamine*
- Ethyl ether*
- Formamide*
- Hydrogen chloride*
- Methyl alcohol*
- Methyl alcohol hydrochloride*
- Molybdenum trioxide*
- Naphthalene*
- Potassium propionate*
- Pyridine
- Vapor pressure, **3**: 288
- Viscosity, **5**: 39
- Silver propionate
- Freezing point-solubility in water, **4**: 412; **7**: 324
- Sodium propionate
- Boiling point elevation, **3**: 339
- Density, aqueous solution, **3**: 102
- Toluene
- Density, **3**: 164
- Xylene
- Distribution coefficients in water, **3**: 425

Propionic acid hydrochloride**-Methyl alcohol*****Propionic anhydride**

- Dielectric constant, **6**: 91
- Heat of combustion, **5**: 166
- Polarization of light scattered by, **5**: 267
- Viscosity, **7**: 217

Propionitrile

- Absorption spectra, **5**: 331
- Boiling point, **3**: 338
- Critical point data, **3**: 239, 248
- Density, **3**: 28
- Dielectric constant, **6**: 82, 85
- Electrical conductivity, **6**: 143
- Heat of combustion, **5**: 167
- Heat of solution in water, **5**: 148
- Heat of vaporization, **5**: 137
- Hydrolysis, **7**: 141
- Orthobaric density, **3**: 239
- Refractive index, **7**: 35
- Solubility in water, **3**: 387
- Pressure, effect of, **3**: 393
- Solubility of salts in, **4**: 208
- Specific heat
- Gas, **5**: 81
- Liquid, **5**: 108
- Surface tension, **4**: 449
- Vapor pressure, **3**: 217
- Viscosity, **7**: 214
- Acetamide*
- Benzil*
- Benzoic acid*
- Benzyl cyanide*
- Diisoamyl*
- Dimethylpyrone*
- Diphenylamine*
- Methyl cyanoacetate*
- Naphthalene*
- Potassium iodide*
- Tetraethylammonium iodide
- Boiling point elevation, **3**: 338
- Density, **3**: 162
- Tetrapropylammonium iodide
- Density, **3**: 162
- Propionylphenylacetylene
- Magnetic susceptibility, **6**: 363
- Verdet constant, **6**: 430
- Proplatinum (alloy), **2**: 382
- Proportional limit, definition, **2**: viii

Propyl acetate

- Absorption spectra, **5**: 332, 338
- Azeotropic mixtures, **3**: 320-321
- Boiling point, **3**: 220
- Condensation on ions and nuclei, **6**: 117
- Critical point data, **3**: 242, 248
- Density, **3**: 29
- Aqueous solution, **3**: 114
- Dielectric constant, **6**: 88
- Diffusion of vapor in air, **5**: 62
- Electrical conductivity, **6**: 145
- Flash point, **2**: 162
- Heat of vaporization, **5**: 137
- Ions, mobility of, in, **6**: 112
- Orthobaric density, **3**: 242
- Refractive index, **7**: 37
- Polarization of light scattered by
- Gas, **5**: 266
- Liquid, **5**: 267
- Solubility in water, **3**: 388
- Specific heat, **5**: 109
- Surface tension, **4**: 452
- Aqueous solution, **4**: 469
- Thermal conductivity, **5**: 228
- Vapor pressure, **3**: 220
- Aqueous solution, **3**: 364
- Vapor pressure above 1 atm., **3**: 242
- Verdet constant, **6**: 428
- Viscosity, **5**: 43; **7**: 216
- Acetone*
- Amyl formate*
- Benzene*
- Benzene*-Methyl butyrate-Toluene
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl lactate*
- Ethyl propionate*
- Isoamyl formate*
- Isobutyl formate*
- Isohexane*
- Magnesium iodide*
- Nitrocellulose*
- 1, 2, 4-Trimethylbenzene
- Density, **3**: 172
- Propyl alcohol
- Absorption, index of, **6**: 98
- Absorption spectra, **5**: 332, 336
- Azeotropic mixtures, **3**: 318-321, 323
- Birefringence, electric, **7**: 111
- Boiling point, **3**: 218, 340
- Aqueous solution, **3**: 310
- Compressibility, **3**: 42
- Condensation on ions and nuclei, **6**: 117
- Critical point data, **3**: 240, 248
- Density, **3**: 28, 33
- Aqueous solution, **3**: 112, 119; **7**: 68
- Dielectric absorption, **6**: 86, 98
- Dielectric constant, **6**: 86
- Dielectric dispersion, **6**: 98
- Diffusion in benzene, **5**: 74
- Diffusion in water, **5**: 70
- Diffusion of vapor in gases, **5**: 62
- Electrical conductivity, **6**: 143
- Flash point, **2**: 161
- Freezing point lowering of aqueous solution, **4**: 262
- Heat of combustion, **5**: 164
- Heat of solution in water, **5**: 148, 160
- Heat of vaporization, **5**: 137, 138
- Heat of wetting by, **5**: 142
- Inflammability, limits of, **2**: 180
- Ions, mobility of, in, **6**: 112
- Magnetic susceptibility, **6**: 361
- Orthobaric density, **3**: 240
- Polarization of light reflected from, **5**: 261
- Polarization of light scattered by
- Gas, **5**: 265
- Liquid, **5**: 266
- Pressure-volume relations for gas, **3**: 438

* Data for system will be found under this compound in Index. Full explanation on page vii.

Propyl alcohol.—(Continued)

Refractive index
 Aqueous solution, **7**: 68
 Liquid, **6**: 98; **7**: 35, 79
 Solubility of salts in, **4**: 208
 Specific heat
 Aqueous solution, **5**: 116
 Liquid, **5**: 114
 Solid, **5**: 102
 Surface tension, **4**: 450
 Aqueous solution, **4**: 467
 Thermal conductivity, **5**: 227, 228
 Vapor pressure, **3**: 218
 Aqueous solution, **3**: 290, 365
 Vapor pressure above 1 atm., **3**: 240
 Verdet constant, **6**: 426
 Aqueous solution, **6**: 427
 Dispersion, **6**: 433, 434
 Viscosity
 Aqueous solution, **5**: 23
 Gas, **5**: 3
 Liquid, **5**: 33, 37, 40; **7**: 215, 222
 -Acenaphthene*
 -Acetic acid*
 -Air*
 -Allyl alcohol*
 -Ammonia*
 -Ammonium bromide*
 -Ammonium bromide*-Ethyl alcohol
 -Ammonium bromide*-Methyl alcohol
 -Ammonium chloride*
 -Ammonium chloride*-Ethyl alcohol
 -Ammonium perchlorate*
 -Amyl iodide*
 -Aniline*
 -Anisic acid*
 -Barium perchlorate*
 -Benzene*
 -Benzil*
 -Benzoic acid*
 -Boric acid*
 -Bromobenzene*
 -Bromoform*
 -Bromotoluene*
 -Cadmium iodide*
 -Calcium perchlorate*
 -Camphor*
 -Carbon disulfide*
 -Carbon tetrachloride*
 -Cesium perchlorate*
 -Chloroform*
 -Chloroform*-Iodine
 -Cinnamic acid*
 -p-Dibromobenzene*
 -Diethyl tartrate*
 -Ethane*
 -Ethyl acetate*
 -Ethyl alcohol*
 -Ethyl alcohol*-Mercuric bromide
 -Ethyl alcohol*-Mercuric chloride
 -Ethyl alcohol*-Mercuric cyanide
 -Ethyl alcohol*-Mercuric iodide
 -Ethyl alcohol*-Potassium iodide
 -Ethyl alcohol*-Sodium bromide
 -Ethyl alcohol*-Sodium iodide
 -Ethyl bromide*
 -Ethyl ether*
 -Ethylene bromide*
 -Formamide*
 -Glycerol*
 -Heptane*
 -Isoamyl alcohol*
 -Isoamyl formate*
 -Isobutyl alcohol*
 -Lauric acid*
 -Lithium chloride*
 -Lithium perchlorate*
 -Lithium salicylate*
 -Magnesium bromide*
 -Magnesium perchlorate*
 -Malic acid*

Propyl alcohol.—(Continued)

-Mercuric bromide*
 -Mercuric bromide*-Methyl alcohol
 -Mercuric chloride*
 -Mercuric chloride*-Methyl alcohol
 -Mercuric cyanide*
 -Mercuric cyanide*-Methyl alcohol
 -Mercuric iodide*
 -Mercuric iodide*-Methyl alcohol
 -Methyl alcohol*
 -Methyl alcohol*-Potassium iodide
 -Methyl alcohol*-Sodium bromide
 -Methyl alcohol*-Sodium iodide
 -Methyl iodide*
 -Methylene iodide*
 -Naphthalene*
 -Nicotine*
 -p-Nitroaniline*
 -o-Nitrobenzoic acid*
 -Oxalic acid*
 -Picric acid*
 -Potassium chloride*
 -Potassium iodide*
 -Potassium perchlorate*
 -Pyridine
 Heat of solution, **5**: 153
 -Resorcinol
 Heat of solution, **5**: 153
 -Rubidium perchlorate
 Density, **3**: 142
 -Salicylic acid
 Boiling point elevation, **3**: 340
 Heat of solution, **5**: 153
 -Sodium bromide
 Density, **3**: 141
 -Sodium chloride
 Freezing point-solubility in water, **4**: 413
 -Sodium iodide
 Boiling point elevation, **3**: 340
 Density, **3**: 141
 -Sodium perchlorate
 Density, **3**: 141
 -Strontium perchlorate
 Density, **3**: 140
 -Urethan
 Boiling point elevation, **3**: 340
 Density, **3**: 164
 Dielectric constant, **6**: 102
 Freezing point-solubility, **4**: 174
 Heat of solution, **5**: 153
Propyl benzoate
 Azeotropic mixtures, **3**: 322
 Birefringence, magnetic, **7**: 111
 Specific heat, **5**: 112
Propyl benzyl ketone
 -Benzene*
Propyl bromide
 Absorption spectra, **5**: 331
 Azeotropic mixtures, **3**: 318–320, 323
 Birefringence, electric, **7**: 111
 Boiling point, **3**: 218, 340
 Dielectric constant, **6**: 82, 86
 Diffusion of vapor in air, **5**: 62
 Electrical conductivity, **6**: 143
 Heat of combustion, **5**: 168
 Magnetic susceptibility, **6**: 361
 Polarization of light scattered by, **5**: 266
 Refractive index, **7**: 35
 Solubility in water, **3**: 387
 Surface tension, **4**: 450
 Thermal conductivity, **5**: 228
 Vapor pressure, **3**: 218
 Verdet constant, **6**: 428
 Viscosity
 Gas, **5**: 3
 Liquid, **7**: 214
 -Acetanilide*
 -Benzoic acid*
 -Bromocamphor*
 -Ethyl alcohol*

Propyl butyrate

Absorption spectra, **5**: 342
 Critical temperature, **3**: 249
 Dielectric constant, **6**: 93
 Diffusion of vapor in gases, **5**: 62
 Electrical conductivity, **6**: 145
 Heat of vaporization, **5**: 137
 Specific heat, **5**: 111
 Surface tension, **4**: 457
 Viscosity, **7**: 219
 -Azobenzene*
 -Benzene*
 -p-Dibromobenzene*
 -Ethyl alcohol*
 -Ethyl chloroacetate*
 -Hexane*
 -Hydrogen peroxide*
 -Naphthalene*
 -Palmitic acid*
 -Phenanthrene*
 -Stearic acid
 Density, **3**: 190

Propyl chloride

Azeotropic mixtures, **3**: 320
 Birefringence, electric, **7**: 111
 Boiling point, **3**: 218
 Critical point data, **3**: 245, 248
 Dielectric constant, **6**: 82, 86
 Heat of combustion, **5**: 168
 Magnetic susceptibility, **6**: 361
 Polarization of light scattered by, **5**: 266
 Refractive index, **7**: 35
 Solubility in water, **3**: 387
 Specific heat, gas, **5**: 80
 Surface tension, **4**: 450
 Thermal conductivity, **5**: 228
 Vapor pressure, **3**: 218
 Vapor pressure above 1 atm., **3**: 245
 Viscosity, **7**: 214

Propyl chloroacetate, specific heat, **5**: 109**Propyl chloroformate**

Dielectric constant, **6**: 87

Propyl cyanoacetate, surface tension, **4**: 454**Propyl dichloroacetate**, specific heat, **5**: 109**Propyl diethylacetate**, viscosity, **7**: 220**Propyl dipropylacetate**, viscosity, **7**: 221**Propyl ether**, viscosity, **7**: 218**Propyl fluoride**

Solubility in non-aqueous liquids, **3**: 269
 Solubility in water, **3**: 261

Propyl formate

Absorption spectra, **5**: 337
 Azeotropic mixtures, **3**: 319–321
 Boiling point, **3**: 219
 Compressibility, **3**: 36
 Critical point data, **3**: 241, 248
 Density, **3**: 31
 Aqueous solution, **3**: 114
 Dielectric constant, **6**: 87
 Diffusion of vapor in gases, **5**: 62
 Electrical conductivity, **6**: 145
 Flash point, **2**: 162
 Heat of vaporization, **5**: 137
 Orthobaric density, **3**: 241
 Polarization of light scattered by
 Gas, **5**: 266
 Liquid, **5**: 266
 Solubility in water, **3**: 388
 Specific heat, **5**: 108
 Surface tension, **4**: 451
 Aqueous solution, **4**: 468
 Thermal conductivity, **5**: 228
 Vapor pressure, **3**: 219
 Aqueous solution, **3**: 364
 Vapor pressure above 1 atm., **3**: 241
 Verdet constant, **6**: 429
 Viscosity
 Gas, **5**: 3
 Liquid, **5**: 28; **7**: 215
 -Cadmium iodide*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Propyl formate.—(Continued)

-Ethyl alcohol*

-Hydrogen peroxide*

-Isobutyl formate*

-Stannic chloride

Density, **3**: 138Viscosity, **5**: 28**Propyl hexylpropionate**, magnetic susceptibility, **6**: 363**Propyl hydrocinnamate**Surface tension, **4**: 461Viscosity, **7**: 221**Propyl iodide**Absorption spectra, **5**: 331Azeotropic mixtures, **3**: 319–320Density, **3**: 28, 33Diffusion of vapor in air, **5**: 62Heat of combustion, **5**: 168

Refractive index

Gas, **7**: 10Liquid, **7**: 35Solubility in water, **3**: 387Surface tension, **4**: 450Thermal conductivity, **5**: 228Vapor pressure, **3**: 218Verdet constant, **6**: 428Viscosity, **7**: 214

-Chloroform*

Propyl isobutyrateCritical temperature, **3**: 249Diffusion of vapor in gases, **5**: 62Heat of vaporization, **5**: 137Specific heat, **5**: 111Surface tension, **4**: 457Viscosity, **7**: 219**Propyl isovalerate**Azeotropic mixtures, **3**: 322Critical temperature, **3**: 249Heat of vaporization, **5**: 137Surface tension, **4**: 458**Propyl lactate**Azeotropic mixtures, **3**: 322, 324Density, **3**: 31**Propyl methylethylacetate**, viscosity, **7**: 220**Propyl methylpropylacetate**, viscosity, **7**: 220**Propyl nitrate**, dielectric constant, **6**: 86**Propyl phenyl ether**Specific heat, **5**: 112Viscosity, **7**: 220**Propyl propionate**Absorption spectra, **5**: 332, 340Boiling point, **3**: 222Critical temperature, **3**: 249Density, aqueous solution, **3**: 114Dielectric constant, **6**: 91Diffusion of vapor in gases, **5**: 62Electrical conductivity, **6**: 145Heat of vaporization, **5**: 137Solubility in water, **3**: 390Specific heat, **5**: 110Surface tension, **4**: 455, 469Vapor pressure, **3**: 222Aqueous solution, **3**: 364Verdet constant, **6**: 429Viscosity, **7**: 218

-Ethyl acetate*

-Ethyl alcohol*

Propyl sulfide, magnetic susceptibility, **6**: 362**Propyl o-tolyl ether**, viscosity, **7**: 221**Propyl trichloracetate**, specific heat, **5**: 109**Propyl valerate**Dielectric constant, **6**: 94Diffusion of vapor in gases, **5**: 63Electrical conductivity, **6**: 145Specific heat, **5**: 112Viscosity, **7**: 220**Propylamine**Absorption spectra, **5**: 332, 336Critical point data, **3**: 240, 248**Propylamine.**—(Continued)Density, **3**: 28Aqueous solution, **3**: 114Dielectric constant, **6**: 82Electrical conductivity, aqueous solution, **6**: 264Freezing point lowering of aqueous solution, **4**: 262Heat of combustion, **5**: 167Heat of solution in water, **5**: 148Refractive index, **7**: 35Solubility in water, **3**: 261Surface tension, **4**: 450Aqueous solution, **4**: 468Thermal conductivity, **5**: 214Vapor pressure, **3**: 218Vapor pressure above 1 atm., **3**: 240Viscosity, **7**: 215

-Silver nitrate

Density, **3**: 139Viscosity, **5**: 28

-Toluene

Distribution coefficients in water, **3**: 425

-Xylene

Distribution coefficients in water, **3**: 425**Propylammonium chloride**Electrical conductivity, aqueous solution, **6**: 232

-Chloroform*

PropylanilineAbsorption spectra, **5**: 333Viscosity, **7**: 220**Propylbenzene**Absorption spectra, **5**: 333, 345Birefringence, magnetic, **7**: 111Boiling point, **3**: 225Compressibility, **3**: 37Density, **3**: 29, 34Dielectric constant, **6**: 94Diffusion of vapor in air, **5**: 63Flash point, **2**: 161Heat of combustion, **5**: 163Heat of vaporization, **5**: 137Photoluminescence, **5**: 387Refractive index, **7**: 47Specific heat, **5**: 112Surface tension, **4**: 459Vapor pressure, **3**: 225Verdet constant, **6**: 430Viscosity, **7**: 220

-Antimony tribromide*

-Antimony trichloride*

-Hydrogen bromide*

Propylbenzylmethylphenylammonium bromideElectrical conductivity, aqueous solution, **6**: 243**Propylcoumarinic acid**, heat of combustion, **5**: 166**Propylene**Boiling point, **1**: 61; **3**: 218Critical point, **3**: 244, 248Heat of combustion, **5**: 163Inflammability, limits of, **2**: 179Orthobaric density, **3**: 244Refractivity, **7**: 10Solidification point, **1**: 61Solubility in non-aqueous liquids, **3**: 269Solubility in water, **3**: 260Vapor pressure, **3**: 218Vapor pressure above 1 atm., **3**: 244**Propylene bromide**Refractive index, **7**: 80

-Acetic acid*

-Ethylene bromide*

Propylene oxidePhenols, addition of, kinetics, **7**: 124**Propylenediamine**Magnetic susceptibility, **6**: 361**Propyleneglycol**Absorption spectra, **5**: 332Diffusion into methyl alcohol, **5**: 72Heat of combustion, **5**: 164Viscosity, **7**: 215**1, 2-Propyleneglycol 1-propyl ether**Solubility in water, **3**: 390**1, 2-Propyleneglycol 2-propyl ether**Solubility in water, **3**: 390**Propylethylene**Verdet constant, **6**: 428**Propylisopropylcarbinol**, viscosity, **7**: 219**Propylmalonic acid**Electrical conductivity, aqueous solution, **6**: 276Heat of combustion, **5**: 165**1-Propylpiperidine**Solubility in water, **3**: 392**Propylsilicon trichloride**Boiling point, **1**: 113, 163Density, **1**: 113Refractive index, **1**: 113, 165**3-Propyltoluene**, heat of combustion, **5**: 163**Propyltriethyllead**Boiling point, **1**: 116, 163Density, **1**: 116Refractive index, **1**: 116, 165**Propyltrimethyllead**Boiling point, **1**: 116, 163Density, **1**: 116Refractive index, **1**: 116, 165**Prosopite**Density, **1**: 145Refractive index, **1**: 145, 169**Proteins**Hydrolysis by enzymes, **7**: 156Refractive index in various solvents, **7**: 98**Protoactinium**, boiling point, **1**: 102**Protustite**Density, **1**: 124Photoconductivity, **6**: 66Refractive index, **1**: 124, 168; **7**: 21Specific heat, **5**: 97**Pseudobrookite**Density, **1**: 129Refractive index, **1**: 129, 174**Pseudobutylene**Solubility in ethyl alcohol, **3**: 269**Pseudocumene**Azeotropic mixtures, **3**: 322Birefringence, **7**: 111, 113Boiling point, **3**: 225Compressibility, **3**: 37, 39Density, **3**: 30Dielectric constant, **6**: 94Heat of combustion, **5**: 163Heat of vaporization, **5**: 137Photoluminescence, **5**: 387Refractive index, **7**: 47Specific heat, **5**: 112Surface tension, **4**: 459Vapor pressure, **3**: 225Verdet constant, **6**: 430

-Antimony tribromide*

-Antimony trichloride*

Pseudolibethenite, density, **1**: 122**Pseudomesolite**Density, **1**: 154Refractive index, **1**: 154, 169**Pseudouric acid**Heat of combustion, **5**: 167Heat of solution in water, **5**: 149**Pseudowollastonite**Melting point, **1**: 144Refractive index, **1**: 144, 171Specific heat, **5**: 99

See also Calcium metasilicate.

Psychological data, **1**: 92**Psychrometry**, **1**: 71

Pucherite

- Density, **1**: 135
 Refractive index, **1**: 135, 174
Pukateine, optical rotatory power, **7**: 475
Pulegone
 Absorption spectra, **5**: 347
 Dielectric constant, **6**: 95
 Optical rotatory power, **7**: 415
 Refractive index, **7**: 52
 Verdet constant, **6**: 426
 Dispersion, **6**: 433
Pulp board
 Density, **2**: 313
 Thermal conductivity, **2**: 313
Pumice
 Density, **2**: 87
 Hardness, **2**: 87
Pumice gravel
 Density, **2**: 313
 Thermal conductivity, **2**: 313
Pumicite. See *Pumice*.
Pumps, vacuum, **1**: 92
 Speed of exhaust, **1**: 91
Purpurin, photoluminescence, **5**: 387
Putrescine hydrochloride
 Absorption spectra, **5**: 370
Pyradiolin, **2**: 296
 Dielectric constant, **2**: 298
 Dielectric strength, **2**: 298
 Electrical conductivity, **2**: 297
 Explosion time, **2**: 297
 Power factor, **2**: 297
Pyralin, **2**: 296
 Dielectric constant, **2**: 298
 Dielectric strength, **2**: 298
 Electrical conductivity, **2**: 297
 Explosion time, **2**: 297
 Power factor, **2**: 297
Pyrrargyrite
 Density, **1**: 124
 Refractive index, **1**: 124, 168
 Photoconductivity, **6**: 66
 Specific heat, **5**: 97
 Thermal expansion, **3**: 44
Pyrazole
 Absorption spectra, **5**: 336
 Refractive index, **7**: 35
Pyrene
-Quinoline
 Density, **7**: 88
 Refractive index, **7**: 88
 Dispersion, **7**: 107
Pyridine
 Absorption spectra, **5**: 332, 337, 363, 366, 369
 Birefringence, **7**: 111
 Boiling point, **3**: 219, 342
 Critical point data, **3**: 248
 Cryoscopic constant, **4**: 183
 Density, **3**: 28, 33
 Aqueous solution, **3**: 112-114
 Dielectric constant, **6**: 88
 Diffusion in ethyl alcohol, **5**: 74
 Diffusion in methyl alcohol, **5**: 72
 Diffusion in water, **5**: 70
 Electrical conductivity, **6**: 144
 Aqueous solution, **6**: 268
 Freezing point lowering of aqueous solution, **4**: 262
 Heat of combustion, **5**: 167
 Heat of solution in water, **5**: 149
 Heat of vaporization, **5**: 137
 Heat of wetting by, **5**: 142
 Inflammability, limits of, **2**: 181
 Magnetic susceptibility, **6**: 361
 Refractive index
 Aqueous solution, **7**: 69
 Liquid, **7**: 36, 80
 Solubility of salts in, **4**: 210
 Specific heat, **5**: 109
 Surface tension, **4**: 451

Pyridine.—(Continued)

- Vapor pressure, partial
 Aqueous solution, **3**: 291
 Verdet constant, **6**: 428
 Viscosity, **5**: 36, 41; **7**: 216
 Aqueous solution, **5**: 20
*-Acetamide**
*-Acenaphthene**
*-Acetic acid**
*-Acetonitrile**
-Acetonitrile-Silver nitrate*
*-Allyl bromide**
*-Allyl thiocyanate**
*-Aluminum chloride**
*-Ammonia**
*-Aniline**
-Aniline-Silver nitrate*
*-Anthracene**
*-Anthraquinone**
*-Benzamide**
*-Benzanilide**
*-Benzene**
*-Benzil**
*-Benzoic acid**
*-Benzophenone**
*-Beryllium chloride**
*-Butyric acid**
*-Cadmium iodide**
*-Carbanilide**
*-Carbazole**
*-Carbon tetrachloride**
*-Chloroform**
*-o-Chlorophenol**
*-Cobaltous bromide**
*-Cobaltous chloride**
*-Cresol (o-, m-, p-)**
*-Cupric acetate**
*-Cupric chloride**
*-Cuprous bromide**
*-Cuprous chloride**
*-Cuprous cyanide**
*-Cyanuric acid**
*-Diethyl tartrate**
*-Diethylammonium chloride**
*-Diphenyl**
*-Diphenylamine**
*-1, 2-Diphenylthiourea**
*-1, 2-Diphenylurea**
*-Ethyl acetate**
*-Ethyl acetoacetate**
*-Ethyl alcohol**
*-Ethyl bromide**
*-Ethyl diethylacetoacetate**
*-Ethyl ether**
*-Ethyl ethylacetoacetate**
*-Euxanthic acid**
*-Ferric chloride**
*-Ferrous chloride**
*-Fluorene**
*-Formamide**
*-Formanilide**
*-Formic acid**
*-Hexanitrodiphenylamine**
*-Iodine**
*-Isobutyl chloride**
*-Lactose**
*-Lead bromide**
*-Lead chloride**
*-Lead iodide**
*-Lead nitrate**
*-Lithium chloride**
*-Mangostin**
*-Mercuric bromide**
*-Mercuric chloride**
*-Mercuric cyanide**
*-Mercuric ethyl chloride**
*-Mercuric iodide**
*-Methyl alcohol**
*-Methyl di-(o-bromobenzoyl)tartrate**
*-Methyl iodide**
*-Methylacetamide**

Pyridine.—(Continued)

- Methylpentanes**
*-N-Methylphenylacridinium iodide**
*-Methylphenylpicramide (α -, β -)**
*-Naphthalene**
*- β -Naphthol**
*-o-Nitrophenol**
*-Nitrosodimethylaniline**
*-Oleates**
*-Phenanthrene**
*-Phenol**
-Phenol-Sulfuric acid*
*-Phthalanil**
*-Phthalimide**
*-Picric acid**
*-Potassium iodide**
*-Potassium sulfate**
*-Potassium thiocyanate**
*-Propionamide**
*-Propionic acid**
*-Propyl alcohol**
-Raffinose
 Freezing point-solubility in water, **4**: 415
-Resorcinol
 Boiling point elevation, **3**: 342
 Heat of solution, **5**: 153
-Salicylic acid
 Boiling point elevation, **3**: 342
-Silver cyanide
 Boiling point elevation, **3**: 342
-Silver nitrate
 Boiling point elevation, **3**: 342
 Density, **3**: 139
 Osmotic pressure, **4**: 431
 Specific heat, **5**: 125
 Viscosity, **5**: 28
-Silver perchlorate
 Density, **3**: 139
 Freezing point-solubility, **4**: 200
-Silver thiocyanate
 Boiling point elevation, **3**: 342
 Specific heat, **5**: 125
-Stannous bromide
 Boiling point elevation, **3**: 342
-Stannous chloride
 Boiling point elevation, **3**: 342
-Succinic acid
 Boiling point elevation, **3**: 342
-Sucrose
 Osmotic pressure, **4**: 431
-Tartaric acid
 Boiling point elevation, **3**: 342
-Tartaric ditoluide
 Boiling point elevation, **3**: 342
-Tetraethylammonium iodide
 Boiling point elevation, **3**: 342
-Thiocarbanilide
 Density, **3**: 172
-Thiourea
 Density, **3**: 150
 Viscosity, **5**: 34
-Toluene
 Distribution coefficients in water, **3**: 427
-p-Toluidine
 Boiling point elevation, **3**: 342
-Triethylammonium chloride
 Boiling point elevation, **3**: 342
-Triphenylmethane
 Boiling point elevation, **3**: 342
-Urea
 Density, **3**: 150
 Viscosity, **5**: 34
-Urethan
 Density, **3**: 164
 Viscosity, **5**: 40
-Xylene
 Distribution coefficients in water, **3**: 427
-Zinc bromide
 Boiling point elevation, **3**: 342

* Data for system will be found under this compound in Index. Full explanation on page vii.

Pyridine.—(Continued)

- Zinc chloride
- Boiling point elevation, **3**: 342

Pyridine acetate

- Heat of solution in water, **5**: 150
- Acetone*
- Benzene*
- Carbon tetrachloride*
- Chloroform*
- Ethyl acetate*

Pyridinecarboxylic acids, electrical conductivity, aqueous solution, **6**: 272**Pyridinedicarboxylic acids**, electrical conductivity, aqueous solution, **6**: 278**Pyridinetricarboxylic acids**, electrical conductivity, aqueous solution, **6**: 284**Pyrite**

- Compressibility, **3**: 50
- Density, **1**: 128
- Electrical conductivity, **6**: 154, 155
- Magnetic field, effect of, **6**: 422
- Emission, spectral, **5**: 254, 257, 258
- Grating spaces of, **6**: 7
- Hall effect, **6**: 416
- Magnetic susceptibility, **6**: 364
- Specific heat, **5**: 98
- Thermoelectric power, **6**: 224
- X-ray diffraction data, **1**: 343
- X-rays, refraction of, by, **6**: 50
- See also Iron disulfide.

Pyroaconitine

- Optical rotatory power, **7**: 477

Pyroaurite

- Density, **1**: 142
- Refractive index, **1**: 142, 166

Pyrobitumen, **2**: 168–169**Pyrocatechol**

- Absorption spectra, ultra-violet, **5**: 361, 362
- Cryoscopic constant, **4**: 183
- Electrical conductivity, aqueous solution, **6**: 273
- Heat of combustion, **5**: 167
- Heat of dilution with water, **5**: 161
- Heat of fusion, **5**: 133
- Heat of solution in water, **5**: 149
- Refractive index, **7**: 29
- Silver reduction equivalent, **5**: 439
- Specific heat
 - Aqueous solution, **5**: 125
 - Liquid, **5**: 110
 - Solid, **5**: 103
- Surface tension, aqueous solution, **4**: 469
- Verdet constant, **6**: 429
- Viscosity, aqueous solution, **5**: 23
- Acetone*
- Ethyl alcohol*
- Ethyl ether*
- Phenol*

Pyrochroite

- Density, **1**: 127
- Refractive index, **1**: 127, 167

Pyroelectricity, **6**: 209

- Temperature, effect of, **6**: 212

Pyrogallol

- Absorption spectra, **5**: 339
- Boiling point elevation in aqueous solution, **3**: 327
- Chemiluminescence, **5**: 389
- Density, aqueous solution, **3**: 114
- Diffusion in methyl alcohol, **5**: 73
- Diffusion in water, **5**: 71
- Electrical conductivity, aqueous solution, **6**: 273
- Heat of combustion, **5**: 167
- Heat of solution in water, **5**: 149
- Silver reduction equivalent, **5**: 439
- Solubility in water, **4**: 253
- Surface tension, aqueous solution, **4**: 469
- Vapor pressure lowering in aqueous solution, **3**: 293

Pyrogallol.—(Continued)

- Verdet constant, **6**: 429

- Acetamide*
- Acetone*
- Acetophenone*
- m*-Aminophenol*
- Amyl acetate*
- Aniline*
- Antipyrine*
- Azobenzene*
- Benzamide*
- Benzhydrol*
- Benzophenone*
- Camphor*
- Carbazole*
- Cinnamic acid*
- Dimethyl oxalate*
- Diphenylamine*
- Diphenylmethane*
- Ethyl alcohol*
- Ethyl ether*
- Fenchone*
- Hydrogen chloride*
- m*-Hydroxybenzaldehyde*
- Isoamyl alcohol*
- Naphthylamine (α -, β -)*
- Phenol*
- Phenylenediamine (*o*-, *m*-, *p*-)*
- Succinic acid
 - Freezing point-solubility, **4**: 114
- Succinimide
 - Freezing point-solubility, **4**: 113
- p*-Toluidine
 - Freezing point-solubility, **4**: 141
- Trimethylcarbinol
 - Freezing point-solubility, **4**: 116
- Triphenylcarbinol
 - Freezing point-solubility, **4**: 141
- Triphenylmethane
 - Freezing point-solubility, **4**: 141

Pyrogallolcarboxylic acid

- Electrical conductivity, aqueous solution, **6**: 280
- Heat of combustion, **5**: 165

Pyroindaconitine, optical rotatory power, **7**: 478**Pyrolusite**

- Density, **1**: 127
- See also Manganese dioxide.

Pyromellitic acid

- Electrical conductivity, aqueous solution, **6**: 293
- Heat of combustion, **5**: 166

Pyrometry, optical, **1**: 59**Pyromorphite**

- Density, **1**: 115
- Dielectric constant, **6**: 99
- Melting point, **1**: 115
- Refractive index, **1**: 115, 173; **7**: 20
- Thermal conductivity, **5**: 232
- Transition temperature, **4**: 7

Pyromucic acid

- Absorption spectra, **5**: 337, 378
- Density, aqueous solution, **3**: 114
- Electrical conductivity, aqueous solution, **6**: 268
- Heat of combustion, **5**: 165

Pyrope

- Density, **1**: 142
- Refractive index, **1**: 142, 165
- Thermal expansion, **3**: 45

Pyrophanite

- Density, **1**: 128
- Melting point, **1**: 128
- Refractive index, **1**: 128, 168

Pyrophosphoric acid

- Electrical conductivity, aqueous solution, **6**: 260
- Freezing point lowering of aqueous solution, **4**: 255
- Heat of formation, **5**: 180

Pyrophosphoric acid.—(Continued)

- Ionization constants, **7**: 242
- Refractive index, aqueous solution, **7**: 66
- Solubility in water, **4**: 218
- Potassium hydroxide*

Pyrophosphorous acid

- Heat of formation, **5**: 180

Pyrophyllite

- Dehydration behavior, **7**: 313
- Density, **1**: 137
- Refractive index, **1**: 137, 171

Pyros (alloy), **2**: 382**Pyrostilpnite**, density, **1**: 124**Pyrosulfuric acid**

- Heat of fusion, **5**: 131
- Specific heat
 - Liquid, **5**: 106
 - Solid, **5**: 95

Pyrotartaric acid

- Electrical conductivity, aqueous solution, **6**: 270
- Heat of solution in water, **5**: 149
- Refractive index, **7**: 35
- Specific heat, **5**: 102

Pyrotartaric anhydride

- Verdet constant, **6**: 428

Pyroxenite, compressibility, **3**: 51**Pyroxylin**, **2**: 296**Pyrrhotite**

- Curie point, **6**: 410
- Density, **1**: 128
- Electrical conductivity, **6**: 154
- Magnetic properties, **6**: 413
- Thermal conductivity, **5**: 232
- Thermal expansion, **3**: 44
- X-ray crystal data, **1**: 343

Pyrrrole

- Absorption spectra, **5**: 332, 336, 363, 364, 366, 373
- Birefringence, **7**: 111
- Heat of combustion, **5**: 167
- Refractive index, **7**: 36
- Triphenylmethane
 - Freezing point-solubility, **4**: 113

Pyruvic acid

- Absorption spectra, **5**: 336, 376
- Electrical conductivity, aqueous solution, **6**: 263
- Heat of combustion, **5**: 165
- Chloroform*
- Ethyl ether*
- Xylene
 - Distribution coefficients in water, **3**: 425

Q-alloy, **2**: 382**Quantum**

- Definition, **1**: 40
- Notation, **6**: 25

Quantum mechanics, **1**: 47; **5**: 393, 418**Quantum number**, **1**: 47; **5**: 408, 418; **6**: 25

- Definition, **1**: 41

Quantum sensitivity, **7**: 167**Quartz**

- Compressibility, **3**: 50; **4**: 21
- Contact charge, **6**: 57
- Density, **1**: 112; **2**: 82; **4**: 20
- Dielectric constant, **6**: 341
- Elastic constants, **4**: 21
- Electrical conductivity, **6**: 154; 341
- Emission, spectral, **6**: 343
- Heat of formation, **5**: 182
- Heat of transition, **5**: 106, 182
- Inversion points, **4**: 20
- Light, transmission of, **5**: 264
- Magnetic susceptibility, **6**: 341, 364
- Optical constants, **6**: 341
- Optical rotation, **6**: 342
- Piezoelectric constant, **6**: 210, 211, 341
- Piezoelectric constant, **6**: 210, 211
- Radiation, transmission of, **5**: 264

Quartz.—(Continued)

- Radioactivity, **1**: 378
 Refractive index, **1**: 112, 166; **6**: 341
 Rotation of, **2**: 336
 Solution velocity in hydrofluoric acid, **5**: 59
 Specific heat, **5**: 105
 Spectral filter, use as, **5**: 273
 Strength properties, **4**: 21
 Thermal conductivity, **4**: 21; **5**: 106, 231, 233
 Thermal expansion, **4**: 21
 Verdet constant, **6**: 343, 426
 Dispersion, **6**: 344
 Volume change on inversion, **4**: 21
 X-ray diffraction data, **1**: 341
Quartz powder, thermal conductivity under reduced pressures, **2**: 315

Quartzite

- Bulk density, **2**: 53
 Compressive strength, **2**: 47
 Hardness, **2**: 50
 Impact hardness, **2**: 51
 Porosity, **2**: 54
 Thermal conductivity, **2**: 55
 Thermal diffusivity, **2**: 55
 Thermal expansion, **2**: 54
 Transverse strength, **2**: 49

Queen's metal, **2**: 382**Quercitol**

- Crystallography, **1**: 326
 Density, **3**: 45
 Aqueous solution, **3**: 114
 Heat of combustion, **5**: 164
 Optical rotatory power, **7**: 354, 405
 Pyroelectric effect, **6**: 209

Quercitrin, optical rotatory power, **7**: 389**Quetenite**

- Density, **1**: 142
 Refractive index, **1**: 142, 170

Quilts, sound, transmission of, by, **6**: 459**Quinamine**, optical rotatory power, **7**: 471**Quinhydrone**

- Absorption spectra, **5**: 348
 Specific heat, **5**: 104
 -Hydrogen chloride*

Quinic acid

- Absorption spectra, **5**: 369
 Density, aqueous solution, **3**: 114; **7**: 69
 Electrical conductivity, aqueous solution, **6**: 283
 Heat of solution in water, **5**: 150
 Refractive index, aqueous solution, **7**: 69
 -Molybdenum trioxide*

Quinicine, optical rotatory power, **7**: 472**Quinidine**

- Absorption spectra, **5**: 334, 354
 Crystallography, **1**: 336
 Optical rotatory power, **7**: 472

Quinidine sulfate

- Absorption spectra, **5**: 370
 Optical rotatory power, **7**: 473

Quinine

- Absorption spectra, **5**: 334, 354, 370, 372
 Crystallography, **1**: 336
 Electrical conductivity, aqueous solution, **6**: 302
 Optical rotatory power, **7**: 472
 -Benzene*
 -Ethyl ether*
 -Isoamyl alcohol*

Quinine hydrochloride

- Absorption spectra, **5**: 354, 370, 372
 Optical rotatory power, **7**: 472

Quinine salicylate

- Ethyl alcohol*

Quinine sulfate

- Absorption spectra, **5**: 370-372, 379
 Crystallography, **1**: 336
 Optical rotatory power, **7**: 473
 Photoluminescence, **5**: 387

Quinine sulfate.—(Continued)

- Solubility in water, **4**: 219
 -Isoamyl alcohol*
Quininic acid
 Absorption spectra, **5**: 369
 Electrical conductivity, aqueous solution, **6**: 297

Quinizarin, photoconductivity, **6**: 66**Quinol**

- Silver reduction equivalent, **5**: 439
 Solubility in water, **4**: 253

Quinoline

- Absorption spectra, **5**: 333, 344, 363, 364, 369, 370-372
 Birefringence, electric, **7**: 111, 113
 Boiling point, **3**: 225, 346
 Critical temperature, **3**: 249
 Density, **3**: 29

Aqueous solution, **3**: 115

- Dielectric constant, **6**: 94
 Diffusion in methyl alcohol, **5**: 73
 Electrical conductivity, **6**: 144
 Heat of combustion, **5**: 168
 Magnetic susceptibility, **6**: 363
 Photoluminescence, **5**: 387
 Refractive index, **7**: 45
 Specific heat, **5**: 112
 Surface tension, **4**: 459
 Vapor pressure, **3**: 225
 Verdet constant, **6**: 430
 Viscosity, **5**: 28, 38, 44, 46, 48; **7**: 220
 -Acetophenone*
 -Acetylmethylaminonaphthalene (α -, β -)*
 -2-Acetylmethylaminonaphthalene*
 -2-Aminoanthraquinone*
 -Aniline*
 -Anisole*
 -Anthracene*
 -Anthranol methyl ether*
 -Anthraquinone*
 -Benzaldehyde*
 -Benzene*
 -Benzil*
 -Benzoic acid*
 -Benzoin*
 -Bromo-p-xylene*
 -Cadmium bromide*
 -Cadmium chloride*
 -Cadmium iodide*
 -Carbon tetrachloride*
 - α -Chloroanthracene*
 - β -Chloroanthracene*
 -9-Chloroanthracene*
 - β -Chloronaphthalene*
 -9-Chlorophenanthrene*
 -o-Chlorophenol*
 -Cobaltous bromide*
 -Cobaltous chloride*
 -m-Cresol*
 -Cuprous chloride*
 -p-Cymene*
 -1, 5-Diaminoanthraquinone*
 -9, 10-Dibromoanthracene*
 -m-Dibromobenzene*
 -2, 7-Dibromofluorene*
 -2, 7-Dibromo-9-methylfluorene*
 -1, 5-Dichloroanthracene*
 -2, 4-Dichloroanthracene*
 -9, 10-Dichloroanthracene*
 -1, 4-Dichloronaphthalene*
 -1, 5-Dichloronaphthalene*
 -1, 7-Dichloronaphthalene*
 -1, 8-Dichloronaphthalene*
 -2, 7-Dichloronaphthalene*
 -9, 10-Dichlorophenanthrene*
 -Diethyl tartrate*
 -Diethylaminonaphthalene (α -, β -)*
 -1, 4-Diethylaminonaphthalene*
 -2, 3-Diethylaminonaphthalene*
 -9, 10-Dihydroanthracene*
 -Dihydrophenanthrene*

Quinoline.—(Continued)

- 1, 5-Dihydroxynaphthalene diamyl ether*
 -Diphenyl*
 -Diphenylene oxide*
 -Diphenylmethane*
 -Ethyl alcohol*
 -Ethyl benzoate*
 -Ethyl 2, 7-dibromofluorene-9-acetate*
 -Ethyl ether*
 -Ethyl β -naphthoate*
 -1-Ethyl-4-acetylnaphthalene*
 -Ethylaminonaphthalene (α -, β -)*
 -o-Ethylbenzoic acid*
 -9-Ethyl-10-chloroanthracene*
 -Ethylhydroanthranol*
 -Fluoranthene*
 -Fluorene*
 -Fluorenone*
 -Hydrogen peroxide*
 -Indigotin*
 -Iodonaphthalene (α -, β -)*
 -Isobutyl diacetyl-d-tartrate*
 -Isobutyl tartrate*
 -1-Keto-7-methyl-1, 2, 3, 4-tetrahydronaphthalene
 -Lithium chloride*
 -Mercuric bromide*
 -Mercuric cyanide*
 -Mercuric iodide*
 -Methyl alcohol*
 -1-Methyl-2-acetylnaphthalene*
 -Methylanthracene (α -, β -)*
 -9-Methylanthracene*
 -p-Methylethylbenzene*
 -1-Methyl-2-ethylnaphthalene*
 -m-Methylstilbene*
 -Naphthaldehyde (α -, β -)*
 -Naphthalene*
 -Naphthol (α -, β -)*
 - β -Naphthyl ethyl ether*
 -Naphthylamine (α -, β -)*
 -1, 4-Naphthylenediamine*
 -1, 5-Naphthylenediamine*
 -1, 6-Naphthylenediamine*
 -1, 8-Naphthylenediamine*
 -2, 3-Naphthylenediamine*
 -2, 7-Naphthylenediamine*
 -Nickel bromide*
 -Nickel chloride*
 -o-Nitrophenol*
 -Nitrosodimethylaniline*
 -Phenanthrene*
 -Phenanthraquinone*
 -Phenol*
 -Pyrene*
 -Retene

Density, **7**: 88**Refractive index**, **7**: 88**Dispersion**, **7**: 108**Silver nitrate****Density**, **3**: 139**Viscosity**, **5**: 28**Stearic acid****Boiling point elevation**, **3**: 346**Stilbene****Density**, **7**: 88**Refractive index**, **7**: 88**Dispersion**, **7**: 107**Sulfur****Freezing point lowering**, **4**: 38**Tetraethylphenylenediamine** (o-, m-, p-)**Density**, **7**: 88**Refractive index**, **7**: 88**Dispersion**, **7**: 107**o-Toluidine****Density**, **7**: 86**Refractive index**, **7**: 86**Dispersion**, **7**: 105

* Data for system will be found under this compound in Index. Full explanation on page vii.

Quinoline.—(Continued)

- p*-Tolylidimethylcarbinol
 - Density, **7**: 87
 - Refractive index, **7**: 87
 - Dispersion, **7**: 106
- Trichlorofluorene
 - Density, **7**: 87
 - Refractive index, **7**: 87
 - Dispersion, **7**: 107
- Triphenylmethane
 - Boiling point elevation, **3**: 346
- Xylene
 - Distribution coefficients in water, **3**: 431
- Zinc bromide
 - Boiling point elevation, **3**: 347
- Zinc chloride
 - Boiling point elevation, **3**: 346
- Zinc iodide
 - Boiling point elevation, **3**: 347
- Quinoline dyes, absorption spectra, **7**: 193
- Quinoline ethiodide
 - Chloroform*
 - Isoamyl alcohol*
- Quinoline hydrobromide
 - Chloroform*
- Quinoline hydrochloride
 - Chloroform*
- Quinoline hydroiodide
 - Chloroform*
- Quinolinic acid, absorption spectra, **5**: 369
- Quinolinium butyl triiodide
 - Electrical conductivity, **6**: 145
- Quinolinium isobutyl triiodide
 - Electrical conductivity, **6**: 145
- Quinolinium propyl triiodide
 - Electrical conductivity, **6**: 145
- Quinone
 - Absorption spectra, **5**: 377
 - Diffusion in benzene, **5**: 74
 - Diffusion in methyl alcohol, **5**: 72
 - Electrical conductivity, aqueous solution, **6**: 272
 - Heat of combustion, **5**: 167
 - Heat of fusion, **5**: 133
 - Heat of solution in water, **5**: 149
 - Magnetic susceptibility, **6**: 362
 - Oxidation-reduction potentials, **6**: 333
 - Silver reduction equivalent, **5**: 439
 - Specific heat
 - Liquid, **5**: 110
 - Solid, **5**: 103
 - Acenaphthene*
 - Anthracene*
 - Diphenylamine*
 - Fluorene*
 - Hydrogen chloride*
 - Hydroquinol*
 - Naphthalene*
 - β -Naphthol*
 - α -Naphthylamine*
 - Nitrobenzene*
 - Nitrogen tetroxide*
 - Phenanthrene*
 - Triphenylcarbinol
 - Freezing point-solubility, **4**: 127
 - Triphenylmethane
 - Freezing point-solubility, **4**: 127
- Quinoneoxime, magnetic susceptibility, **6**: 362
- Quinoxaline
 - Cryoscopic constant, **4**: 183
 - Refractive index, **7**: 42
- Quitenine, absorption spectra, **5**: 372
- Racemization, kinetics of, **7**: 118
- Radian, definition, **1**: 40
- Radiance, definition, **1**: 40
- Radiation
 - Black body, **5**: 237
 - Constants, **1**: 18; **5**: 237

Radiation.—(Continued)

- Electronic. *See* Electronic radiation.
- Filters, **5**: 271
- Hemispherical, **5**: 238, 242
- Intensity of
 - Conversion factors, **1**: 26
 - Definition, **1**: 38
- Luminous efficiency, **5**: 437
- Monochromatic, visibility factor, **5**: 436
- Non-spectral, **5**: 264
- Polarization, **5**: 391
- Radioactive
 - Electronic emission, **1**: 365
 - In gases, **1**: 369
 - Ionization, **1**: 365
 - Ionizing, **1**: 372
 - Sources, **1**: 373
 - Stefan-Boltzmann constant, **5**: 237
 - Temperature, **5**: 246
 - Thermal, **5**: 242
 - Total transmission, **5**: 264
 - Transmission factor, **5**: 264
 - Wien's displacement constant, **5**: 237
- Radiator, perfect, **5**: 237
- Radioactive elements, **1**: 362
- Radioactive materials, distribution of, **1**: 372
- Radioactive processes, energy of, **1**: 366
- Radioactivity, **1**: 361
- Radiolarian earth. *See* Diatomaceous earth.
- Radiometry, **5**: 237
- Radium
 - Boiling point, **1**: 102
 - Density, **1**: 104
 - Emission spectra, **5**: 311
 - Melting point, **1**: 104
 - Persistent lines, **5**: 324
 - Quantum numbers, **5**: 408
 - Spectral series, **5**: 403
 - X-ray emission spectra, **6**: 42
 - Zeeman effect, **5**: 420
- Radium B, rate of solution, **1**: 364
- Radium B + C, diffusion in metals, **5**: 77
- Radium C, rate of solution, **1**: 364
- Radium F, deposition voltage, **1**: 364
- Radium bromide, electrical conductivity, aqueous solution, **6**: 231, 234
- Radium chloride, diffusion in water, **5**: 66
- Radium series
 - Members and constants, **1**: 363
- Radium sulfate
 - Solubility in water, **4**: 233
 - Sulfuric acid
 - Freezing point-solubility in water, **4**: 353; **7**: 344
- Radon
 - Boiling point, **1**: 102; **3**: 203
 - Critical constants, **1**: 102; **3**: 204, 248
 - Density
 - Gas, **1**: 102; **3**: 3
 - Liquid, **1**: 102; **3**: 21
 - Solid, **1**: 104
 - Diffusion in benzene, **5**: 74
 - Diffusion in ethyl alcohol, **5**: 73
 - Diffusion in toluene, **5**: 75
 - Diffusion in water, **5**: 64
 - Emission spectra, **5**: 311
 - Heat of fusion, **1**: 104
 - Heat of vaporization, **1**: 102
 - Melting point, **1**: 104
 - Solubility in
 - Colloidal solutions, **3**: 281
 - Non-aqueous liquids, **3**: 263
 - Solutions, **3**: 271
 - Water, **1**: 364; **3**: 257
 - Triple point, **3**: 203
 - Vapor pressure, **3**: 203, 204
 - Viscosity, gas, **1**: 102; **5**: 2
- Raffinase, **7**: 154

Raffinose

- Absorption spectra, **5**: 334
- Density, aqueous solution, **2**: 352
- Diffusion in water, **5**: 71
- Heat of combustion, **5**: 167
- Heat of solution in water, **5**: 150
- Hydrolysis, **2**: 352
- Hydrolysis by enzymes, **7**: 154
- Optical rotation, **2**: 352
- Solubility in
 - Aqueous ethyl alcohol, **4**: 406
 - Methyl alcohol, **2**: 352
 - Water, **2**: 352
- Vapor pressure lowering in aqueous solution, **3**: 293
- Viscosity, aqueous solution, **5**: 23
- Nitric acid*
- Pyridine*
- Raies ultimes, **5**: 322
- Rain, electric charge on, **6**: 444
- Rakel's metal, **2**: 382
- Rammelsbergite, density, **1**: 132
- Randanite. *See* Diatomaceous earth.
- Randolf metal, **2**: 382
- Rankine, **1**: 40
- Rape oil
 - Compressibility, **2**: 209
 - Rubber softener, **2**: 278
 - Viscosity under pressure, **2**: 209
- Rapp's formula (flow of gas), **5**: 2
- Raspite
 - Melting point, **1**: 134
 - Refractive index, **1**: 134, 173
- Ratanhine, optical rotatory power, **7**: 475
- Rathite, density, **1**: 116
- Rayleigh disc, **6**: 457
- Raymur (alloy), **2**: 382
- Rayo (alloy), **2**: 382; *cf.* 467, 480
 - Electrical conductivity, **6**: 193
- Rayon
 - Moisture content at various humidities, **2**: 323
 - Physical properties, **2**: 234
- Rays. *See* Alpha particles, Beta particles, Gamma rays, X-rays.
- Reactal (alloy), **2**: 382
- Reaction, heat of, **5**: 170
- Reaction rate, theories of, **7**: 115
- Reaction times, **1**: 94
- Realgar
 - Boiling point, **1**: 110, 162
 - Density, **1**: 110
 - Refractive index, **1**: 110, 174; **7**: 19
 - Transformation temperature, **1**: 110
- Réaumur, **1**: 40
- Recoil atoms
 - Initial velocities, **1**: 368
 - Ranges (penetration), **1**: 368
- Reddingite
 - Density, **1**: 127
 - Refractive index, **1**: 127, 172
- Redmanol, **2**: 298
- Reduction of area, definition, **2**: viii
- Reduction potentials, photographic developers, **5**: 441
- Reflection
 - Electrons, **6**: 62
 - Light. *See* Emission, spectral.
 - Molecules, **5**: 53
 - Sound, **6**: 458
 - X-rays, **6**: 49
- Reflectivity
 - Definition, **1**: 40
 - Diffuse, **5**: 261
 - Enamels, vitreous, **2**: 116
 - Metallic, **5**: 248
 - Selective, **5**: 260
 - Specular, **5**: 256
- Refraction, temperature coefficients, conversion from vacuum to air, **7**: 32

* Data for system will be found under this compound in Index. Full explanation on page vii.

Refractive index

Alloys, **5**: 250
 Butyrefractometer values, calculation from, **2**: 212
 Chemical compounds, **1**: 106, 165, 176, 276; **7**: 1
 Definition, **1**: 40
 Electric waves, **6**: 97
 Elements, **1**: 103; **5**: 248
 Glass, **2**: 102, 104
 Metallic reflectors, **5**: 248
 Oils, fats and waxes, **2**: 212
 Petroleum products, **2**: 152
 Rubber, **2**: 259
 Soap solutions, **5**: 456
 Sugars, **2**: 334
 Tar distillates, **2**: 171
 X-rays, **6**: 49
Refractivity, definition, **1**: 40
Refractometer, Zeiss, table for, **2**: 340
Refractory materials, **2**: 82
Refrigerating brines, **2**: 327
Regel-metall, **2**: 382, 557
Regulus of Venus (alloy), **2**: 382; cf. 464
Reichert-Meissl value, definition, **2**: xii
Reiche-Rotzahn theory, **6**: 352
Reichs bronze, **2**: 382
Reith's alloy, **2**: 382
Reluctance, magnetic, definition, **1**: 40
Rennet, **7**: 156
Residual rays, wave length of, **5**: 261
Resilience, definition, **2**: 254
Resins, phenol, **2**: 298
Resista alloy, electrical conductivity, **6**: 196
Resistance alloys, **2**: 382, 474, 480, 588
Resistin (alloy), **2**: 382
 Electrical conductivity, **6**: 168
 Thermoelectric properties, **6**: 222
Resistivity
 Acoustic, **6**: 459
 Definition, **1**: 40, 41
 Electrical. *See* Electrical conductivity.
Resodiacetophenone
 -Acetone*
Resonance potentials. *See* Critical potentials.
Resonators, **6**: 457
 Piezoelectric, **6**: 211
Resorcinol
 Absorption spectra, **5**: 339, 362
 Boiling point elevation in aqueous solution, **3**: 327
 Cryoscopic constant, **4**: 183
 Crystallization velocity, **5**: 61
 Crystallography, **1**: 326
 Density, aqueous solution, **3**: 112, 114
 Dielectric constant, **6**: 90
 Aqueous solution, **6**: 101
 Diffusion in ethyl alcohol, **5**: 74
 Diffusion in water, **5**: 71
 Electrical conductivity, aqueous solution, **6**: 273
 Flash point, **2**: 161
 Heat of combustion, **5**: 167
 Heat of dilution with water, **5**: 161
 Heat of fusion, **5**: 133
 Heat of solution in water, **5**: 149
 Magnetic susceptibility, **6**: 362
 Melting point under pressure, **4**: 15
 Osmotic pressure, **4**: 430
 Photoluminescence, **5**: 386
 Pyroelectric constant, **6**: 209
 Refractive index, **7**: 29
 Solubility in water, **4**: 251, 253
 Specific heat
 Aqueous solution, **5**: 125
 Liquid, **5**: 110
 Solid, **5**: 103
 Surface tension, aqueous solution, **4**: 469
 Transition velocity, **5**: 61

Resorcinol.—(Continued)

Vapor pressure, aqueous solution, **3**: 365
 Vapor pressure lowering in aqueous solution, **3**: 293
 Verdet constant, **6**: 429
 -Acetamide*
 -Acetone*
 -Acetophenone*
 -Acridine*
 -Aminophenol (*m*-, *p*-)*
 -Ammonia*
 -Aniline*
 -Anthracene*
 -Antipyrine*
 -Arsenous bromide*
 -Azobenzene*
 -Barium hydroxide*
 -Benzamide*
 -Benzene*
 -Benzhydrol*
 -Benzophenone*
 -Camphor*
 -Carbazole*
 -Carbon tetrachloride*
 -Catechol*
 -Catechol*-Hydroquinol
 -Catechol*- α -Nitronaphthalene
 -Cineole*
 -Cinnamic acid*
 -Dimethyl oxalate*
 -Diphenylamine*
 -Diphenylmethane*
 -Ethyl acetate*
 -Ethyl alcohol*
 -Ethyl ether*
 -Ethylbenzene*
 -Fenchone*
 -Hydrogen chloride*
 -Hydroquinol*
 -*m*-Hydroxybenzaldehyde*
 -Methyl alcohol*
 -Naphthalene*
 - β -Naphthol*
 -Naphthylamine (α -, β -)*
 -Nitrobenzene*
 - α -Nitronaphthalene*
 -Phenol*
 -Phenylenediamine (*o*-, *m*-, *p*-)*
 -Picric acid*
 -Potassium hydroxide*
 -Propyl alcohol*
 -Pyridine*
 -Succinic acid
 Freezing point-solubility, **4**: 114
 -Succinimide
 Freezing point-solubility, **4**: 113
 -*p*-Toluidine
 Freezing point-solubility, **4**: 138
 -Trimethylcarbinol
 Freezing point-solubility, **4**: 116
 -Triphenylcarbinol
 Freezing point-solubility, **4**: 139
 -Triphenylmethane
 Freezing point-solubility, **4**: 139
 -*m*-Xylene
 Freezing point-solubility, **4**: 139
 Solubility, mutual, **3**: 397
Resorcinol diethyl ether
 -Cyclopentane*
Resorcinol monomethyl ether
 Absorption spectra, **5**: 342
 Surface tension, **4**: 456
Resorcylic acid
 -Ethyl ether*
 -Xylene
 Distribution coefficients in water, **3**: 430
Retene
 Absorption spectra, **5**: 353
 Heat of combustion, **5**: 164
 -Anthracene*

Retene.—(Continued)

-Carbazole*
 -Phenanthrene*
 -Picramide*
 -Picric acid*
 -Picryl chloride*
 -Quinoline*
 -Styphnic acid
 Freezing point-solubility, **4**: 122
 -1, 3, 5-Trinitrobenzene
 Freezing point-solubility, **4**: 119
 -2, 4, 6-Trinitrotoluene
 Freezing point-solubility, **4**: 146
Reverberation, sound, **6**: 460
Reynold's number, **1**: 403
Rezbanyite, density, **1**: 116
Rezistal (alloy), **2**: 382
Rhagite, density, **1**: 112
Rhamnoheptose
 Optical rotatory power, **7**: 399
Rhamnohexose
 Optical rotatory power, **7**: 398
Rhamnose
 Electrical conductivity, aqueous solution, **6**: 276
 Heat of combustion, **5**: 166
 Optical rotatory power, **7**: 388
 Pyroelectric constant, **6**: 209
 Refractive index, **7**: 30
 Solubility in aqueous ethyl alcohol, **4**: 405
Rhamnose triacetate
 Heat of combustion, **5**: 166
Rhe, definition, **1**: 41
Rhenium, melting point, **1**: 104
Rheostatine, electrical conductivity, **6**: 169
Rheostene alloy, electrical conductivity, **6**: 196
Rheotan (alloy), **2**: 382
 Electrical conductivity, **6**: 171
Rhodamine, photoluminescence, **5**: 387
Rhodoese, optical rotatory power, **7**: 389
Rhodium
 Absorption, index of, **5**: 250
 Boiling point, **1**: 102
 Compressibility, **3**: 47, 49
 Density, **1**: 104; **2**: 456
 Elastic properties, **2**: 588
 Electrical conductivity, **1**: 104; **6**: 136, 137
 Low temperature, **6**: 128, 134
 Electrons freed by X-rays, energy of, **6**: 4
 Emission, spectral, **5**: 242, 254
 Emission spectra, **5**: 311
 Evaporation, velocity of, **5**: 54
 Hardness, **2**: 588
 Magnetic susceptibility, **6**: 355
 Melting point, **1**: 104
 Persistent lines, **5**: 324
 Quantum numbers, **5**: 408
 Refraction, index of, **5**: 250
 Specific heat, **1**: 104; **5**: 94
 Spectral series, **5**: 404
 Thermal conductivity, **5**: 220, 221
 Thermal expansion, **1**: 104; **2**: 462
 Thermoelectric properties, **6**: 214
 X-ray absorption limits, **6**: 37, 38
 X-ray crystal structure, **1**: 340
 X-ray emission spectra, **6**: 37
 X-ray lines, relative intensities, **6**: 32
 X-ray lines, width of, **6**: 26
 X-ray series, limiting frequencies, **6**: 35
 X-rays, absorption coefficient, **6**: 13
 Zeeman effect, **5**: 420, 427
 -Platinum*
Rhodium alloys, list of, **2**: 390
Rhodium black, hydrogen, adsorption of, by, **3**: 253
Rhodium trisodium chloride
 X-rays, absorption coefficient, **6**: 13

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Rhodizite**
Density, 1: 158
Refractive index, 1: 158, 165
- Rhodochrosite**
Compressibility, 3: 50
Density, 1: 127
Refractive index, 1: 127, 167
Thermal conductivity, 5: 232
See also Manganous carbonate.
- Rhodolite.** *See* Garnet.
- Rhodonite**
Density, 1: 128
Melting point, 1: 128
Refractive index, 1: 128, 172
See also Manganese metasilicate.
- Rhombochase, refractive index, 7: 22**
- Rhomboclasite, refractive index, 1: 128, 170**
- Rhotanium (alloy), 2: 382**
- Rhyolite**
Bulk density, 2: 53
Elasticity, 2: 52
Hardness, 2: 50
Impact hardness, 2: 51
Thermal conductivity, 2: 55
Thermal diffusivity, 2: 56
- Ribbon loud speaker, 6: 454**
- Ribose, optical rotatory power, 7: 387**
- Rice powder, thermal conductivity, 2: 315**
- Richards alloy, 2: 382; cf. 465, 546**
- Richards bronze, 2: 382; cf. 556**
- Richardson's speculum, 2: 382**
- Ricinelaic acid, optical rotatory power, 7: 368**
- Ricinoleic acid**
Optical rotatory power, 7: 367
Surface tension, 4: 437, 462
- Ricinostearic acid, optical rotatory power, 7: 367**
- Riebeckite**
Density, 1: 152
Refractive index, 1: 152, 172
- Rifle powders, 7: 497**
- Righi-Leduc effect, 6: 415**
- Rigidity**
Coefficient, effect of magnetization, 6: 439
Definition, 1: 41
Modulus of, conversion factors, 1: 24
- Rinneite**
Density, 1: 158
Refractive index, 1: 158, 167; 7: 28
- Riversideite**
Density, 1: 144
Refractive index, 1: 144, 171
- Roberts-Austen alloy (Purple gold), 2: 382**
- Rochelle salt**
Crystallography, 1: 323
Density, 1: 158
Refractive index, 1: 158, 169
Dielectric constant, 6: 100
Optical rotatory power, 7: 354
Piezoelectric constant, 6: 210, 211
Pyroelectric constant, 6: 211
Thermal expansion, 3: 44
- Rocks**
Ages of (radioactive method), 1: 381
Compressibility, 3: 49
Radioactivity, 1: 377
Thermal conductivity, 5: 231
See also Building stones, Minerals.
- Roma bronze, 2: 382; cf. 556**
- Roman system, weights and measures, 1: 15**
- Romanium (alloy), 2: 382**
- Romeite**
Density, 1: 143
Refractive index, 1: 143, 165
- Ronia metal, 2: 382**
- Rope, strength properties, 2: 236**
- Rope paper, moisture content at various humidities, 2: 323**
- Rosaniline hydrochloride, electrical conductivity, aqueous solution, 6: 232**
- Rose metal, 2: 382**
Electrical conductivity, 6: 197
Specific heat, 5: 121
Thermal conductivity, 5: 223
- Rosein (alloy), 2: 382**
- Rosenhain and Archbutt alloy, 2: 382; cf. 537**
- Rosin**
Dielectric constant, 2: 310
Electrical conductivity, 2: 310
Rubber softener, 2: 277
- Rosin oil, rubber softener, 2: 278**
- Rosin pitch.** *See* Pitches.
- Ross' alloy, 2: 382; cf. 555**
Emission, spectral, 5: 254
- Rotatory power**
Definition, 1: 41
Magnetic, 6: 428
Optical, 2: 334; 7: 353, 355
"Rotguss," thermal conductivity, 5: 224
- Rotoxit (alloy), 2: 382**
- Rubber**
Absorption spectra, 5: 334
Acoustic resistivity, 6: 459
Azobenzene, solubility of, in, 2: 272
Calender grain, 2: 277
Carbon dioxide, permeability to, 2: 272
Castilloa, viscosity, 2: 259
Caucho ball, vulcanization, 2: 264
Cellular
Density, 2: 312
Thermal conductivity, 2: 312
Compounding ingredients, 2: 286
Electrostriction, 6: 207
Ficus, vulcanization, 2: 264
Gases, permeability to, 2: 272
Hard
Chemical and physical agents, effect on, 2: 300
Density, 2: 312
Dielectric constant, 2: 275, 300
Dielectric strength, 2: 300
Electric strength, 2: 275
Electrical conductivity, 2: 275, 300
Physical properties, 2: 275, 292
Power factor, 2: 275
Tensile strength, 2: 300
Thermal conductivity, 2: 312, 5: 217
- Hevea**
Anticoagulants, effect of, 2: 264
Chemical composition, 2: 258
Preparation, factors in, 2: 263
Resin, constituents of, 2: 259
Vulcanizing properties, 2: 262
Hydrogen, permeability to, 2: 272
Milling, effect of, 2: 276
Moisture content at various humidities, 2: 316, 324
Naphthalene, solubility of, in, 2: 272
Para, gases, permeability of, 5: 77
Plasticity milling, effect of, 2: 276
- Raw**
Acid content, 2: 259
Aging of, 2: 290
Density of solutions, 2: 260
Dielectric constant, 2: 272
Electrical conductivity, 2: 272
Imbibition of liquids, 2: 271
Manganese content, 2: 259
Milling, recovery from, 2: 276
Moisture content, 2: 258
Nitrogenous constituents, 2: 258
Organic vapors, absorption of, 2: 269
Physical properties, 2: 259
Power factor, 2: 272
Resin content, 2: 258
Resins, optical activity, 2: 258
- Rubber**
Raw.—(Continued)
Saponifiability, 2: 258
Tensile properties, 2: 261
Viscosity, 2: 259
Water, absorption of, 2: 270
Reclaimed, 2: 290
Selenium, solubility of, in, 2: 272
Soft, thermal conductivity, 5: 217
Softeners, 2: 277
Sponge
Density, 2: 312
Thermal conductivity, 2: 312
Sound, velocity of, in, 6: 459, 465
Sulfur, solubility of, in, 2: 272
Thermal conductivity, 2: 312
Thermal diffusivity, 2: 315
p-Toluidine, solubility of, in, 2: 272
Viscosity, milling, effect of, 2: 276
Vulcanized
Compressibility, 2: 269
Dielectric constant, 2: 273
Electrical conductivity, 2: 273
Gases, permeability to, 5: 76
Hardness, 2: 269
Imbibition of liquids, 2: 271
Load-compression relations, 2: 269
Load-strain relations, 2: 264
Mechanical hysteresis, 2: 267
Organic vapors, absorption of, 2: 269
Poisson's ratio, 2: 268
Power factor, 2: 273
Resistance to tear, 2: 269
Stress-strain curve, 2: 267
Tensile properties, 2: 266
Thermal expansion, 2: 269
Thermal properties, 2: 269
Volume elasticity, 2: 269
Water, absorption of, 2: 271
Vulcanization, accelerators of, 2: 278
X-ray diffraction data, 2: 357
- Rubidium**
Absorption, index of, 5: 250
Boiling point, 1: 102; 3: 205
Cathodoluminescence, 5: 390
Compressibility, 3: 47
Critical potentials, 6: 71
Density
Liquid, 1: 102; 2: 457, 463
Solid, 1: 104; 2: 456
Electrical conductivity
Liquid, 1: 103
Solid, 1: 104; 6: 136, 137
Low temperature, 6: 128, 134
Electrode potential, 6: 332; 7: 309
Emission spectra, 5: 311
Free energy of electrode reaction, 7: 309
Heat of fusion, 1: 104; 2: 458
Heat of vaporization, 1: 102
Isotopes, 1: 47
Magnetic susceptibility, 6: 355
Melting point, 1: 104
Persistent lines, 5: 324
Photoelectric sensitivity, wave length for maximum, 6: 68
Quantum numbers, 5: 408
Radioactivity, 1: 372
Refraction, index of, 5: 250
Specific heat
Liquid, 1: 103; 5: 94
Solid, 1: 104; 5: 94
Spectral series, 5: 403
Thermal expansion
Liquid, 1: 102; 2: 463
Solid, 1: 104; 2: 462
Thermochemistry, 5: 207
Thermoelectric properties, 6: 214
Vapor pressure, 3: 205
Volume change on fusion, 2: 474
X-ray absorption limits, 6: 38
X-ray emission spectra, 6: 37

Rubidium.—(Continued)

- X-ray series, limiting frequencies, **6**: 35
- Cesium**
- Mercury**
- Potassium**
- Sodium*
- Photoelectric sensitivity, wave length for maximum, **6**: 68
- Sulfur*
- Freezing point-solubility, **4**: 26
- Rubidium acetate**, solubility in water, **4**: 242
- Rubidium benzoate**, solubility in water, **4**: 243
- Rubidium bicarbonate**
- Decomposition pressure, **7**: 310
- Heat of decomposition, **7**: 310
- Heat of formation, **5**: 207
- Solubility in water, **4**: 242
- Rubidium bisulfite**, absorption spectra, solutions, **5**: 331
- Rubidium bromate**
- Density, aqueous solution, **3**: 93, 106
- Solubility in water, **4**: 242
- Rubidium bromide**
- Ammine
- Decomposition pressure, **7**: 309
- Heat of decomposition, **7**: 309
- Heat of formation, **5**: 207
- Compressibility, **3**: 50
- Density, **1**: 159
- Aqueous solution, **3**: 93, 106, 108
- Liquid, **3**: 24; **4**: 445
- Solid, **3**: 44
- Electrical conductivity, aqueous solution, **6**: 235, 239
- Heat of formation, **5**: 207
- Melting point, **1**: 159
- Refractive index, **1**: 159, 165
- Aqueous solution, **7**: 76
- Solubility in water, **4**: 242
- Specific heat, **5**: 101
- Aqueous solution, **5**: 124
- Surface tension, **4**: 445
- Transference number, **6**: 311
- Vapor pressure, **3**: 214
- Viscosity, aqueous solution, **5**: 18
- X-ray diffraction data, **1**: 346
- Acetone**
- Formamide**
- Glycerol**
- Silver bromide*
- Freezing point-solubility, **4**: 59
- Rubidium carbonate**
- Decomposition pressure, **7**: 310
- Heat of formation, **5**: 207
- Magnetic susceptibility, **6**: 360
- Solubility in water, **4**: 242
- Specific heat, **5**: 101
- Rubidium chlorate**
- Density, aqueous solution, **3**: 93, 106
- Solubility in water, **4**: 242
- Rubidium chloride**
- Absorption spectra, **5**: 329
- Boiling point elevation in aqueous solution, **3**: 326
- Compressibility, **3**: 50
- Aqueous solution, **3**: 440
- Density
- Aqueous solution, **3**: 93, 106, 108
- Liquid, **3**: 24; **4**: 445
- Solid, **1**: 159; **3**: 43
- Diffusion in water, **5**: 69
- Electrical conductivity, **6**: 150
- Aqueous solution, **6**: 231, 234, 239
- Freezing point lowering of aqueous solution, **4**: 260
- Heat of formation, **5**: 207
- Heat of fusion, **5**: 131
- Magnetic susceptibility, **6**: 360
- Melting point, **1**: 159

Rubidium chloride.—(Continued)

- Refractive index, **1**: 159, 165
- Aqueous solution, **7**: 76
- Solubility in water, **4**: 242
- Specific heat, **5**: 101
- Aqueous solution, **5**: 124
- Surface tension, **4**: 445
- Transference number, **6**: 309, 311
- Vapor pressure, **3**: 214
- Aqueous solution, **3**: 374
- Vapor pressure lowering in aqueous solution, **3**: 299
- Viscosity, aqueous solution, **5**: 18
- X-ray diffraction data, **1**: 346
- Acetone**
- Antimony trichloride**
- Barium hydroxide**
- Bismuth chloride**
- Cesium chloride**
- Cobaltous chloride**
- Cupric sulfate**
- Cuprous chloride**
- Formamide**
- Iodine**—*Nitrobenzene*
- Lead chloride**
- Lithium chloride**
- Lithium chloride**—*Sodium chloride*
- Mercuric chloride**
- Phthalic acid**
- Potassium chloride**
- Silver chloride*
- Freezing point-solubility, **4**: 58
- Sodium chloride*
- Freezing point-solubility, **4**: 68
- Thallium monochloride*
- Freezing point-solubility, **4**: 54
- Rubidium chloroaurate**
- Solubility in water, **4**: 243
- Rubidium chlorodibromide**
- Decomposition pressure, **7**: 309
- Heat of formation, **5**: 207
- Rubidium cyanoplatinite**
- Luminescence, **5**: 389
- Rubidium dibromiodide**
- Decomposition pressure, **7**: 309
- Heat of formation, **5**: 207
- Rubidium dichlorobromide**
- Decomposition pressure, **7**: 309
- Heat of formation, **5**: 207
- Rubidium dichloriodide**
- Decomposition pressure, **7**: 309
- Heat of formation, **5**: 207
- Rubidium dihydroxytartrate**
- Solubility in water, **4**: 242
- Rubidium dioxide**
- Heat of formation, **5**: 207
- Rubidium dithionate**
- Refractive index, **1**: 159, 166; **7**: 28
- Rubidium flame**
- Electrical properties, **6**: 156
- Rubidium fluoride**
- Density
- Aqueous solution, **3**: 93
- Liquid, **3**: 24; **4**: 445
- Electrical conductivity, aqueous solution, **6**: 231, 232
- Freezing point lowering of aqueous solution, **4**: 260
- Heat of formation, **5**: 207
- Specific heat, **5**: 101
- Surface tension, **4**: 445
- Vapor pressure, **3**: 214
- X-ray diffraction data, **1**: 346
- Aluminum fluoride**
- Rubidium formate**
- Density, aqueous solution, **3**: 94
- Solubility in water, **4**: 242
- Formamide**
- Formic acid**
- Rubidium hydride**, photoelectric sensitivity, wave length for maximum, **6**: 68

Rubidium hydrogen fluoride

- Freezing point lowering of aqueous solution, **4**: 260
- Heat of formation, **5**: 207
- Rubidium hydrogen selenate**
- Rubidium hydrogen tellurate*
- Freezing point-solubility in water, **4**: 356
- Rubidium hydrogen sulfate**
- Heat of formation, **5**: 207
- Vapor pressure lowering in aqueous solution, **3**: 299
- Rubidium hydrogen tellurate*
- Freezing point-solubility in water, **4**: 355
- Rubidium hydrogen tellurate**
- Rubidium hydrogen selenate**
- Rubidium hydrogen sulfate**
- Rubidium hydroxide**
- Density, aqueous solution, **3**: 92
- Dielectric constant of aqueous solution, **6**: 105
- Electrical conductivity, aqueous solution, **6**: 253, 255
- Heat of formation, **5**: 207
- Heat of fusion, **5**: 131
- Heat of transition, **5**: 207
- Solubility in water, **4**: 242
- Transition temperature, **4**: 8
- Viscosity of aqueous solution, **5**: 18
- Potassium hydroxide**
- Sodium hydroxide*
- Freezing point-solubility, **4**: 67, 79
- Rubidium hydroxybenzoate (m-, p-)**
- Solubility in water, **4**: 243
- Rubidium iodate**
- Density, aqueous solution, **3**: 93, 106
- Rubidium iodide**
- Absorption spectra, solutions, **5**: 331
- Ammine
- Decomposition pressure, **7**: 309
- Heat of decomposition, **7**: 309
- Heat of formation, **5**: 207
- Compressibility, **3**: 50
- Density
- Aqueous solution, **3**: 93, 106, 108
- Liquid, **3**: 24; **4**: 445
- Solid, **1**: 159; **3**: 44
- Electrical conductivity, aqueous solution, **6**: 235, 240
- Heat of formation, **5**: 207
- Melting point, **1**: 159
- Refractive index, **1**: 159, 165
- Aqueous solution, **7**: 76
- Solubility in organic solvents, **4**: 205–211
- Solubility in water, **4**: 242
- Specific heat, **5**: 101
- Surface tension, **4**: 445
- Transference number, **6**: 311
- Vapor pressure, **3**: 214
- Viscosity, aqueous solution, **5**: 18
- X-ray diffraction data, **1**: 346
- Acetone**
- Ethyl alcohol**
- Formamide**
- Glycerol**
- Iodine**
- Iodine**—*Nitrobenzene*
- Silver iodide*
- Freezing point-solubility, **4**: 59
- Sulfur dioxide*
- Boiling point elevation, **3**: 328
- Rubidium manganate**
- Solubility in water, **4**: 243
- Potassium manganate**
- Rubidium mesotartrate**
- Crystallography, **1**: 324
- Density, **1**: 159
- Refractive index, **1**: 159, 169

* Data for system will be found under this compound in Index. Full explanation on page vii.

Rubidium nitrate

- Allotropic forms, 4: 13
- Boiling point elevation in aqueous solution, 3: 326
- Density
 - Aqueous solution, 3: 93, 106, 108
 - Liquid, 3: 24; 4: 446
 - Solid, 1: 159; 3: 44
- Electrical conductivity, 6: 150
 - Aqueous solution, 6: 238, 240
- Freezing point lowering of aqueous solution, 4: 260
- Heat of formation, 5: 207
- Heat of transition, 5: 207
- Magnetic susceptibility, 6: 360
- Melting point, 1: 159
- Melting point under pressure, 4: 13
- Reflectivity, selective, 5: 260
- Refractive index, 1: 159, 169
 - Aqueous solution, 7: 76
- Solubility in water, 4: 242
- Specific heat, aqueous solution, 5: 124
- Surface tension, 4: 446
- Transition temperature, 1: 159; 3: 44; 4: 8
- Vapor pressure lowering in aqueous solution, 3: 299
- Volume change on melting, 4: 13
- Acetone*
- Formamide*
- Potassium nitrate*

Rubidium oxalotellurate

- Solubility in water, 4: 243

Rubidium oxide

- Heat of formation, 5: 207

Rubidium perchlorate

- Density, aqueous solution, 3: 106
- Refractive index, 7: 28
- Solubility in water, 4: 242
- Transition temperature, 4: 8
- Acetone*
- Butyl alcohol*
- Ethyl acetate*
- Ethyl alcohol*
- Isobutyl alcohol*
- Methyl alcohol*
- Propyl alcohol*

Rubidium periodate

- Density, aqueous solution, 3: 106
- Solubility in water, 4: 242

Rubidium peroxide

- Heat of formation, 5: 207

Rubidium persulfate

- Refractive index, 1: 159, 169

Rubidium rhodium sulfate

- Refractive index, 1: 160, 165

Rubidium salicylate

- Solubility in water, 4: 243

Rubidium selenate

- Density, 1: 159
- Aqueous solution, 3: 93
- Refractive index, 1: 159, 170; 7: 29
- Solubility in water, 4: 242

Rubidium silicate, freezing point lowering of aqueous solution, 4: 260**Rubidium sulfate**

- Boiling point elevation in aqueous solution, 3: 326
- Density
 - Aqueous solution, 3: 93, 106, 108
 - Liquid, 3: 24; 4: 445
 - Solid, 1: 159
- Electrical conductivity, aqueous solution, 6: 237, 240
- Freezing point lowering of aqueous solution, 4: 260
- Heat of formation, 5: 207
- Magnetic susceptibility, 6: 360
- Melting point, 1: 159
- Refractive index, 1: 159, 169; 7: 28
 - Aqueous solution, 7: 76

Rubidium sulfate.—(Continued)

- Solubility in water, 4: 242
 - Surface tension, 4: 445
 - Thermal expansion, 3: 44
 - Transition temperature, 1: 159; 4: 8
 - Vapor pressure, aqueous solution, 3: 374
 - Vapor pressure lowering in aqueous solution, 3: 299
 - Viscosity, aqueous solution, 5: 18
 - X-ray diffraction data, 1: 346
 - Calcium sulfate*
 - Cupric chloride*
- Rubidium sulfide**
- Heat of formation, 5: 207
- Rubidium tartrate**
- Density, aqueous solution, 3: 94
 - Optical rotatory power, 7: 354
 - Piezoelectric constant, 6: 210
- Rubidium tetrasulfoniodide**
- Decomposition pressure, 7: 309
 - Heat of decomposition, 7: 309
 - Heat of formation, 5: 207
- Rubidium thallium chloride**
- Heat of formation, 5: 207
- Rubidium thiocyanate**
- Heat of formation, 5: 207
 - Sulfur dioxide complex
 - Decomposition pressure, 7: 309
 - Heat of decomposition, 7: 309
 - Potassium thiocyanate*
- Rubidium titanium sulfate**
- Decomposition pressure of hydrate, 7: 309
 - Refractive index, 1: 159, 166
- Rubidium tribromide**
- Decomposition pressure, 7: 309
 - Heat of formation, 5: 207
- Rubidium triiodide**
- Decomposition pressure, 7: 309
 - Heat of formation, 5: 207
- Rubidium vanadous sulfate**
- Decomposition pressure of hydrate, 7: 310
 - Solubility in water, 4: 243
- Rubidium zinc selenate**
- Density, 1: 160
 - Refractive index, 1: 160, 169; 7: 31
- Rubidium zinc sulfate**
- Density, 1: 160; 3: 44
 - Hydrate
 - Decomposition pressure, 7: 310
 - Heat of decomposition, 7: 310
 - Refractive index, 1: 160, 169; 7: 31
 - Solubility in water, 4: 243

Ruby

- Dielectric constant, 6: 99
- Magnetic susceptibility, 6: 364
- Photoluminescence, 5: 387
- X-rays, reflection of, by, 6: 50

Rübel bronze, 2: 382, 556**Rumania, weights and measures, 1: 11****Rupert's metal, 2: 382****Rupture, modulus of, definition, 2: viii****Russia, weights and measures, 1: 11****Rustless steel, 2: 382, 470, 509, 604, 606****Ruthenium**

- Boiling point, 1: 102
- Density, 1: 104; 2: 456
- Electrical conductivity, 1: 104; 6: 136
- Emission spectra, 5: 311
- Evaporation, velocity of, 5: 54
- Hardness, 2: 588
- Magnetic susceptibility, 6: 355
- Melting point, 1: 104
- Persistent lines, 5: 324
- Quantum numbers, 5: 408
- Specific heat, 1: 104; 5: 94
- Spectral series, 5: 404
- Thermal expansion, 1: 104; 2: 462
- Thermochemistry, 5: 190

Ruthenium.—(Continued)

- X-ray absorption limits, 6: 37, 38
- X-ray absorption spectra, 6: 37
- X-ray crystal structure, 1: 340
- X-ray series, limiting frequencies, 6: 35
- Zeeman effect, 5: 420

-Platinum***Ruthenium alloys, list of, 2: 390****Ruthenium dioxide**

- Decomposition pressure, 7: 274
- Heat of decomposition, 7: 274
- Heat of formation, 5: 190

Ruthenium tetraoxide

- Solubility in water, 4: 224

Ruthenium thallium sulfate

- Refractive index, 1: 126, 165

Ruthenium trichloride

- Decomposition pressure, 7: 274
- Heat of decomposition, 7: 274
- Heat of formation, 5: 190

Rutherfordine

- Density, 1: 134
- Refractive index, 1: 134, 172

Rutile

- Compressibility, 3: 50
- Density, 1: 113
- Dielectric constant, 6: 99
- Heat of transition, 5: 182
- Magnetic susceptibility, 6: 364
- Refractive index, 1: 113, 168; 7: 20
- Thermal conductivity, 5: 232
- Thermal expansion, 3: 43
- X-ray diffraction data, 1: 341
- See also Titanium oxide.

Rydberg constant, 5: 393; 6: 23**Definition, 1: 41****Rydberg frequency, 6: 23****Value, 1: 18****Rydberg wave number, 1: 18****Rydberg's fundamental frequency****Definition, 1: 41****Rydberg's universal series constant****Definition, 1: 41****S-less steel, 2: 333; cf. 508, 603****S.M.L. alloy, 2: 383; cf. 469, 480, 604, 606****S.M. steel, 2: 383; cf. 525, 604****Saccharic acid**

- Electrical conductivity, aqueous solution, 6: 276
- Optical rotatory power, 7: 398

Saccharic acid lactone

- Heat of combustion, 5: 166

Saccharimetry, 2: 334**Saccharin**

- Absorption spectra, 5: 341
- Dielectric constant, aqueous solution, 6: 101
- Electrical conductivity, aqueous solution, 6: 278
- Osmotic pressure, 4: 430
- Amyl acetate*
- Ethyl ether*

Saccharose

- Absorption spectra, 5: 333
- Adsorption by charcoal, 3: 251
- Crystallography, 1: 332
- Diffusion in water, 5: 71
- Electrical conductivity, aqueous solution, 6: 300
- Piezoelectric constant, 6: 210, 212
- Pyroelectric constant, 6: 210, 212
- Verdet constant, 6: 430

Safflorite, density, 1: 131**Safrol**

- Absorption spectra, 5: 333
- Birefringence, magnetic, 7: 111
- Dielectric constant, 6: 95
- Diffusion of vapor in air, 5: 63
- Magnetic susceptibility, 6: 363
- Refractive index, 7: 49

Safrol.—(Continued)

- Viscosity, **7**: 220
 -Carbon tetrachloride*
 -Isoamyl acetate*
- Salammoniac.** See Ammonium chloride.
- Salge metal**, **2**: 382
- Salicin**
 Diffusion in water, **5**: 71
 Freezing point lowering of aqueous solution, **4**: 263
 Heat of solution in water, **5**: 150
 Optical rotatory power, **7**: 392
- Salicylaldehyde**
 Absorption spectra, **5**: 341
 Dielectric constant, **6**: 91
 Diffusion in benzene, **5**: 74
 Diffusion in methyl alcohol, **5**: 73
 Electrical conductivity, **6**: 144
 Aqueous solution, **6**: 279
 Heat of solution in water, **5**: 150
 Heat of vaporization, **5**: 137
 Refractive index, **7**: 40
 Solubility in water, **3**: 391
 Specific heat, **5**: 110
 Surface tension, **4**: 455
 Verdet constant, **6**: 429
 Viscosity, **7**: 218
 -Acetone*
 -Benzene*
 -Diethyl tartrate*
 -Ethyl alcohol*
 -Ethyl ether*
 -Glycerol*
 -Isoamyl acetate*
 -Potassium iodide*
 -Tetramethylammonium iodide
 Density, **3**: 169
 -Trichloroacetic acid
 Freezing point-solubility, **4**: 102
- Salicylamide**
 Boiling point elevation in aqueous solution, **3**: 327
 Surface tension, **4**: 456
 -Acetone*
 -Benzene*
 -Chloroform*
 -Ethyl alcohol*
 -Ethyl ether*
- Salicylic acid**
 Absorption spectra, **5**: 341, 362, 373
 Activity coefficient, **7**: 246
 Boiling point elevation in aqueous solution, **3**: 327
 Diffusion in methyl alcohol, **5**: 73
 Electrical conductivity, aqueous solution, **6**: 279
 Esterification constant, **7**: 138
 Free energy of ionization, **7**: 246
 Free energy of solution, **7**: 246
 Heat of combustion, **5**: 162, 165
 Heat of solution in water, **5**: 150
 Ionization constant, **7**: 246
 Solubility in water, **3**: 391; **4**: 252, 253
 Surface tension, aqueous solution, **4**: 469
 -Acetamide*
 -Acetic acid*
 -Acetone*
 -Amyl acetate*
 -Antipyrine*
 -Benzamide*
 -Benzene*
 -Benzoic acid*
 -Camphor*
 -Carbon disulfide*
 -Carbon tetrachloride*
 -Chloroform*
 -Cineole*
 -Cumene*
 -Dichloromethane*
 -Dimethylpyrone*

Salicylic acid.—(Continued)

- Ethyl acetate*
 -Ethyl alcohol*
 -Ethyl alcohol*-Water
 -Ethyl ether*
 -Formic acid*
 -Hydrogen chloride*
 -*m*-Hydroxybenzaldehyde*
 -Isoamyl alcohol*
 -Malonic acid*
 -Methyl alcohol*
 -Methylpicric acid*
 -Nitric acid*
 -Nitrobenzene*
 -*o*-Nitrobenzoic acid*
 -Phenol*
 -Propyl alcohol*
 -Pyridine*
 -Sodium chloride
 Freezing point-solubility in water, **4**: 418
 -Sodium salicylate
 Freezing point-solubility in water, **4**: 376, 418
 -Toluene
 Density, **3**: 187
 -Turpentine
 Density, **3**: 187
 -Xylene
 Density, **3**: 187
 Distribution coefficients in water, **3**: 430
- Salicylsulfonic acid**
 -Ethyl alcohol*
- Sallit's speculum**, **2**: 382
- Salmonsite**
 Density, **1**: 130
 Refractive index, **1**: 130, 172
- Salol.** See Phenyl salicylate.
- Salts, fused**
 Electrical conductivity, **6**: 147
 Freezing point-solubility, **4**: 41
- Salvador**, weights and measures, **1**: 5
- Salvarsan dihydrochloride**
 Magnetic susceptibility, **6**: 363
- Samarium**
 Cathodoluminescence, **5**: 388, 390
 Density, **1**: 104; **2**: 456
 Emission spectra, **5**: 312
 Melting point, **1**: 104
 Persistent lines, **5**: 324
 Thermochemistry, **5**: 194
 X-ray absorption limits, **6**: 39
 X-ray emission spectra, **6**: 39
 X-ray series, limiting frequencies, **6**: 35
- Samarium bromate**
 Solubility in water, **4**: 228
- Samarium chloride**
 Absorption spectra, solutions, **5**: 328
 Ammines, heat of formation, **5**: 194
 Electrical conductivity, aqueous solution, **6**: 233
 Heat of formation, **5**: 194
 Solubility in water, **4**: 227
- Samarium ethyl sulfate**
 Density, **1**: 140
 Refractive index, **1**: 140, 166
- Samarium nitrate**
 Absorption spectra, solutions, **5**: 328
 Density, aqueous solution, **3**: 71
 Specific heat, aqueous solution, **5**: 123
- Samarium oxalate**
 Electrical conductivity, aqueous solution, **6**: 258
 Solubility in acids, **7**: 339
- Sulfuric acid
 Freezing point-solubility in water, **4**: 335

Samarium oxide

- Cathodoluminescence, **5**: 390
 Heat of formation, **5**: 194
 Magnetic susceptibility, **6**: 359
- Samarium sulfate**
 Decomposition pressure, **7**: 290
 Electrical conductivity, aqueous solution, **6**: 236
 Density, **1**: 139
 Magnetic susceptibility, **6**: 359
 Refractive index, **1**: 139, 170; **7**: 23
 Solubility in water, **4**: 227
 -Ammonium sulfate*
 -Sulfuric acid
 Freezing point-solubility in water, **4**: 348
- Sambunigrin**
 Optical rotatory power, **7**: 392
- Samlegierung (alloy)**, **2**: 382
- Sand**
 Density, **2**: 315
 Dielectric constant, **6**: 105
 Sound, velocity of, in, **6**: 466
 Thermal conductivity, **2**: 315
 Thermal diffusivity, **2**: 315
- Sand-lime brick**, **2**: 64, 65
- Sandstone**
 Bulk density, **2**: 53
 Compressive strength, **2**: 48
 Compressibility, **3**: 51
 Density, **2**: 315
 Dielectric constant, **6**: 105
 Elasticity, **2**: 52
 Hardness, **2**: 50
 Impact hardness, **2**: 50
 Porosity, **2**: 54
 Shearing strength, **2**: 49
 Tensile strength, **2**: 49
 Thermal conductivity, **2**: 55, 315
 Thermal diffusivity, **2**: 55, 316
 Thermal expansion, **2**: 54
 Transverse strength, **2**: 49
- Sanitary bodies**, **2**: 65
- Santalene**, optical rotatory power, **7**: 462
- Santalenic acid**
 Optical rotatory power, **7**: 466
- β -Santalol**, optical rotatory power, **7**: 465
- Santolic acid**
 Optical rotatory power, **7**: 466
- Santonin**
 Absorption spectra, **5**: 351
 Crystallography, **1**: 333
 Optical rotatory power, **7**: 466
- Santononic acid**
 Crystallography, **1**: 334
 Optical rotatory power, **7**: 466
- Santorine earth.** See Pumice.
- Santorini.** See Pumice.
- Sapogenine**, optical rotatory power, **7**: 393
- Saponification**, kinetics of, **7**: 128
- Saponification value**, definition, **2**: xii
- Sapphire**, X-rays, reflection of, by, **6**: 50
- Sapphirine**
 Density, **1**: 142
 Refractive index, **1**: 142, 172
- Saragossa grass**
 Density, **2**: 313
 Thermal conductivity, **2**: 313
- Sarcosite**
 -Akermanite*
 -Gehlenite*
- Sarcosine**, heat of combustion, **5**: 167
- Sarkinite**
 Density, **1**: 127
 Refractive index, **1**: 127, 173
- Sartorite**, density, **1**: 116
- Sassolite**
 Density, **1**: 136
 Refractive index, **1**: 136, 168
- Saturn**, characteristics, **1**: 392

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Sawdust**
Density, 2: 313
Thermal conductivity, 2: 313
- Scacchite**
Density, 1: 127
Melting point, 1: 127
See also Manganous chloride.
- Scandium**
Boiling point, 1: 102
Critical potentials, 6: 72
Density, 1: 104
Electronic structure, normal and excited, 6: 72
Emission spectra, 5: 313
Isotopes, 1: 47
Melting point, 1: 104
Persistent lines, 5: 324
Quantum numbers, 5: 408
Spectral series, 5: 404
X-ray absorption limits, 6: 36, 44
X-ray absorption spectra, 6: 36
X-ray series, limiting frequencies, 6: 35
Zeeman effect, 5: 420, 428
- Scandium chloride**
Absorption spectra, solutions, 5: 327
Electrical conductivity, 6: 148
Aqueous solution, 6: 233
- Scandium nitrate**
Magnetic susceptibility, 6: 359
- Scandium oxalate**
Magnetic susceptibility, 6: 359
Solubility in aqueous solutions, 7: 338
-*Ammonium oxalate**
-*Hydrogen chloride**
-*Sulfuric acid*
Freezing point-solubility in water, 4: 335
- Scandium oxide**
Band spectra, 5: 416
Electrons, thermal emission of, 6: 54
Magnetic susceptibility, 6: 359
Specific heat, 5: 98
Thermionic work function, 6: 54
- Scandium sulfate**
Decomposition pressure, 7: 289
Electrical conductivity, aqueous solution, 6: 236
Magnetic susceptibility, 6: 359
Solubility in water, 4: 226
-*Sulfuric acid*
Freezing point-solubility in water, 4: 348; 7: 338
- Scapolite**, thermal conductivity, 5: 231
- Scattered light**, intensity of, 5: 266
- Scattering**, X-rays, 6: 8
- Sceptre brass**, 2: 382, 556
- Schallerite**
Density, 1: 128
Refractive index, 1: 128, 167
- Scheelite**
Density, 1: 145
Refractive index, 1: 145, 167
Thermal conductivity, 5: 232
See also Calcium tungstate.
- Schist**
Bulk density, 2: 52
Elasticity, 2: 51
Hardness, 2: 50
Impact hardness, 2: 51
Thermal conductivity, 2: 55
Thermal diffusivity, 2: 55
- Schomberg alloy**, 2: 382
- Schulz alloy**, 2: 382, 546
- Scleron**, 2: 382; *cf.* 468, 534, 601, 608
- Scolecite**
Dehydration behavior, 7: 313
Pyroelectric constant, 6: 210
- Scopolamine**
Optical rotatory power, 7: 475
Racemization, kinetics of, 7: 118
- Scorodite**
Density, 1: 129
Refractive index, 1: 129, 173
- Screening numbers**, 6: 29, 31
- Screens**, 2: 329
- Screw brass**, 2: 382
- Screw bronze**, 2: 382, 555
- Scutellarin**, optical rotatory power, 7: 463
- Sea salt**
-*Cupric oxide**
-*Lead oxide**
-*Stannic oxide*
Freezing point-solubility, 4: 76
-*Zinc oxide*
Freezing point-solubility, 4: 76
-*Zinc sulfide*
Freezing point-solubility, 4: 76
- Sea water**
Compressibility, 3: 440
Density, 3: 100
Maximum, temperature of, 3: 108
Nitrogen, solubility of, in, 3: 272
Oxygen, solubility of, in, 3: 272
Thermal conductivity, 5: 229
- Sea water alloy**, 2: 382; *cf.* 512
- Sealing wax**, contact charge, 6: 57
- Sebacic acid**
Electrical conductivity, aqueous solution, 6: 297
Heat of combustion, 5: 166
-*Ethyl ether**
- Secretan (alloy)**, 2: 382
- Seger cone**, 1: 41
- Selection principles**, 6: 31
- Selenic acid**
Density, aqueous solution, 3: 55
Electrical conductivity, aqueous solution, 6: 242
Freezing point lowering of aqueous solution, 4: 255
Heat of formation, 5: 178
Refractive index, aqueous solution, 7: 65
Solubility in water, 4: 217
Vapor pressure, 3: 207
-*Ammonium selenate**
-*Chromic acid**
-*Potassium selenate**
-*Sodium selenate*
Density, aqueous solution, 3: 96
- Selenious acid**
Decomposition pressure, 7: 238
Freezing point lowering of aqueous solution, 4: 255
Heat of formation, 5: 178
Ionization constant, 7: 238
Magnetic susceptibility, 6: 356
Refractive index, aqueous solution, 7: 65
Vapor pressure, 3: 213
Aqueous solution, 3: 362
-*Ammonium hydroxide**
- Selenium**
Absorption, index of, 5: 250
Band spectra, 5: 416
Boiling point, 1: 102
Compressibility, 3: 47
Critical potentials, 6: 72
Density, 1: 104; 3: 21
Dielectric constant, 6: 75
Electrical conductivity
Liquid, 1: 103
Solid, 1: 104; 6: 141
X-rays, effect of, 6: 6
Electrons freed by X-rays, energy of, 6: 4
Emission spectra, 5: 313
Gaseous polymers, equilibrium constant, 7: 238
Heat of dissociation, 5: 418
Heat of fusion, 1: 104
- Selenium.**—(*Continued*)
Heat of transformation, 2: 458
Heat of vaporization, 1: 102
Isotopes, 1: 47
Magnetic susceptibility, 6: 355
Melting point, 1: 104
Persistent lines, 5: 324
Photoconductivity, 6: 66
Photoelectric threshold, 6: 68
Precipitation, 1: 354
Pressure-volume relations for gas, 3: 436
Quantum numbers, 5: 408
Refractive index
Aqueous solution, 7: 65
Gas, 7: 8
Solid, 1: 103; 5: 250; 7: 11, 19, 77
Specific heat, 1: 104; 5: 94
Spectral series, 5: 404
Surface tension, 1: 103; 4: 447
Thermal conductivity, 5: 220, 221
Thermal expansion, 1: 104; 3: 22
Thermochemistry, 5: 178
Thermoelectric properties, 6: 214
Transmission of radiant energy, 5: 269
Vapor pressure, 3: 201, 202
X-ray absorption limits, 6: 37
X-ray crystal structure, 1: 340
X-ray emission spectra, 6: 37
X-ray series, limiting frequencies, 6: 35
X-rays, emission efficiency, 6: 11
-*Aluminum**
-*Anthraquinone**
-*Antimony**
-*Bismuth**
-*Bromine**
-*Carbon disulfide**
-*Carbon disulfide**-*Sulfur*
-*Copper**
-*Iodine**
-*Lead**
-*Mercuric bromide**
-*Mercuric chloride**
-*Methylene iodide**
-*Phosphorus**
-*Silver*
Equilibrium diagram, 2: 422
Freezing point-solubility, 4: 27
-*Sulfur*
Boiling point elevation, 3: 325
Freezing point-solubility, 4: 24
Refractive index, 7: 77
Dispersion, 7: 102
Specific heat, 5: 121
-*Sulfur-Tellurium*
Freezing point-solubility, 4: 269, 27
-*Sulfur monochloride*
Boiling point elevation, 3: 328
-*Tellurium*
Freezing point-solubility, 4: 26
Thermoelectric properties, 6: 221
-*Thallium*
Freezing point-solubility, 4: 27
-*Tin*
Freezing point-solubility, 4: 26
Thermoelectric properties, 6: 221
-*Zinc*
Equilibrium diagram, 2: 441
Selenium dioxide
Density, aqueous solution, 3: 55
Freezing point lowering of aqueous solution, 4: 261
Heat of formation, 5: 178
Hydrogen halide complexes, decomposition pressure, 7: 238
Solubility in water, 4: 251
Vapor pressure, 3: 207
-*Ethyl alcohol**
Selenium hexafluoride, refractivity, 7: 8
Selenium hydride
Ionization by X-rays, 6: 123

Selenium monochlorideHeat of formation, **5**: 178**Selenium oxybromide**Electrical conductivity, **6**: 142**Selenium oxychloride**Electrical conductivity, **6**: 142Solubility of salts in, **4**: 42Vapor pressure, **3**: 213**Selenium tetrachloride**Heat of formation, **5**: 178**-Sulfur**Freezing point lowering, **4**: 37**Selenyl sulfate, heat of formation, 5: 178****Sellaite**Density, **1**: 141Melting point, **1**: 141Refractive index, **1**: 141, 166*See also* Magnesium fluoride.**Selva metal, 2: 383****Semiopal, dehydration behavior, 7: 313****Senarmontite**Density, **1**: 111Refractive index, **1**: 111, 165Thermal expansion, **3**: 43*See also* Antimony trioxide.**Sensation level, 6: 450****Sensation unit, definition, 6: 450****Serine**Absorption spectra, **5**: 336Optical rotatory power, **7**: 374**Serpentine**Bulk density, **2**: 52Compressibility, **3**: 51Compressive strength, **2**: 47Elasticity, **2**: 52Hardness, **2**: 50Impact hardness, **2**: 51Porosity, **2**: 54Shearing strength, **2**: 48Tensile strength, **2**: 49Thermal conductivity, **2**: 55Thermal diffusivity, **2**: 56Transverse strength, **2**: 49**Sewer pipe, crushing strength, 2: 65****Shaku-do (alloy), 2: 383****Shale**Thermal conductivity, **2**: 55Thermal diffusivity, **2**: 56**Shale tar pitch. See Pitches.****Shale tars. See Tars.****Shattuckite, refractive index, 1: 123, 173****Shavings, wood**Density, **2**: 313Thermal conductivity, **2**: 313**Shearing strength, definition, 2: viii****Sheepskin, sound, velocity of, in, 6: 465****Sheet rock, 2: 46****Sheffield (alloy), 2: 383; cf. 480, 601****Shell head brass, 2: 383; cf. 555, 601****Shellac**Dielectric constant, **2**: 310Electrical conductivity, **2**: 310Magnetic susceptibility, **6**: 364Photoelectric threshold, **6**: 68Sound, velocity of, in, **6**: 466Thermal conductivity, **2**: 311; **5**: 217**Shibu-ichi (alloy), 2: 383****Ship nail alloy, 2: 383****Shock resistance, definition, 2: x****Shore scleroscope hardness**Definition, **2**: x**Shotgun powders, 7: 496****Siam, weights and measures, 1: 11****Sibley alloy, 2: 383; cf. 468, 536****Sideraphite (alloy), 2: 383****Siderite**Compressibility, **3**: 51Density, **1**: 129Dielectric constant, **6**: 99Magnetic susceptibility, **6**: 364**Siderite.—(Continued)**Refractive index, **1**: 129, 167; **7**: 22*See also* Ferrous carbonate.**Sideronatrite**Density, **1**: 152Refractive index, **1**: 152, 171**Siderotilite**Density, **1**: 128Refractive index, **1**: 128, 170**Sidgwick's theory (magnetization), 6: 347****Sidot blende**Dielectric constant, **6**: 105**Siemens Halske (alloy), 2: 383****Siemens unit, 1: 41****Sieves, 2: 329**Cement and sand, **2**: 333Pharmaceutical, **2**: 331Woven, **2**: 330, 332**Sight, psychological data, 1: 92****Silchrome (alloy), 2: 383****Silica**Boiling point, **3**: 214Compressibility, **3**: 50; **4**: 21Crystallographic symmetry, **4**: 20Density, **1**: 112, 341; **2**: 82, 87; **4**: 20Dielectric constant, **6**: 99, 341Dissociation pressure, **7**: 246Elastic constants, **4**: 21Electrical conductivity, **6**: 154, 341Electrons, thermal emission of, **6**: 54Free energy of formation, **7**: 246Fusion temperature, **2**: 83Heat of formation, **5**: 182Heat of fusion, **5**: 106Heat of transformation, **5**: 106Heat of vaporization, **3**: 214Inversion points, **4**: 20Luminescence, **5**: 389Magnetic susceptibility, **6**: 341, 356Optical constants, **6**: 341Photoelectric constants, **6**: 68Reflectivity, **6**: 343Refractive index, **1**: 112; **6**: 341Specific heat, **5**: 105Strength properties, **4**: 21Thermal conductivity, **2**: 315; **4**: 21;**5**: 106, 217, 231, 233Thermal expansion, **4**: 21Thermionic work function, **6**: 54Vapor pressure, **3**: 214; **7**: 246Verdet constant, **6**: 343, 426Volume change on inversion, **4**: 21X-ray diffraction data, **1**: 341; **2**: 357*See also* Cristobalite, Quartz, Tridymite.*-Aluminum oxide***-Aluminum oxide*-Barium oxide**-Aluminum oxide*-Calcium oxide**-Aluminum oxide*-Lithium oxide**-Aluminum oxide*-Magnesium oxide**-Aluminum oxide*-Manganous oxide**-Aluminum oxide*-Potassium oxide**-Aluminum oxide*-Sodium oxide**-Anorthite***-Anorthite*-Forsterite**-Barium oxide***-Calcium oxide***-Calcium oxide*-Ferrous oxide**-Calcium oxide*-Lithium oxide**-Calcium oxide*-Magnesium oxide**-Calcium oxide*-Sodium oxide**-Calcium oxide*-Titanium dioxide**-Cobaltous oxide***-Cryolite***-Cuprous oxide***-Diopside***-Diopside*-Forsterite**-Ferrous oxide***-Ferrous oxide*-Magnesium oxide**-Ferrous oxide*-Manganous oxide**-Iron*-Oxygen**-Lead oxide****Silica.—(Continued)***-Leucite***-Lithium metasilicate***-Lithium oxide***-Lithium oxide*-Zirconium oxide**-Magnesium oxide***-Manganous oxide***-Manganous oxide*-Titanium dioxide**-Nickel oxide***-Potassium oxide***-Sodium oxide*Freezing point-solubility, **4**: 85, 87

Refractive index, aqueous solution,

7: 95*-Strontium oxide*Freezing point-solubility, **4**: 85, 87*-Zinc oxide*Freezing point-solubility, **4**: 85, 86*-Zirconium oxide*Freezing point-solubility, **4**: 85, 86**Silica, fused**Crushing strength, **2**: 83Density, **2**: 82Electrical conductivity, **2**: 86**Silica brick**Crushing strength, **2**: 83Density, **2**: 82Electrical conductivity, **2**: 86Expansion on heating, **2**: 84Fusion temperature, **2**: 83Porosity, **2**: 82Specific heat, **2**: 85

Temperature of failure under load,

2: 83Thermal conductivity, **2**: 85Thermal expansion, **2**: 83**Silica gel**Adsorption of gases on, **3**: 251Heat of wetting, **5**: 142, 143**Silicane**Boiling point, **3**: 232Critical point data, **3**: 232, 248Decomposition pressure, **7**: 246

Density

Gas, **3**: 3Liquid, **3**: 23Heat of formation, **5**: 182Vapor pressure, **3**: 214Vapor pressure above 1 atm., **3**: 232Viscosity, gas, **5**: 3**Silicic acid, ionization constant, 7: 246****Silicochloroform**Absorption spectra, solutions, **5**: 327Magnetic susceptibility, **6**: 356**Silicofluoric acid, electrical conductivity,**aqueous solution, **6**: 243**Silicomolybdic acid**Density, aqueous solution, **3**: 70**Silicon**Absorption, index of, **5**: 250Boiling point, **1**: 102; **3**: 205Compressibility, **3**: 47Critical potentials, **6**: 72Density, **1**: 104; **2**: 456Electrical conductivity, **1**: 104; **6**: 134,**153**Low temperature, **6**: 129Magnetic field, effect of, **6**: 422Emission, spectral, **5**: 254, 255Emission spectra, **5**: 314Entropy, **5**: 89Ettingshausen effect, **6**: 419Hall effect, **6**: 416Heat content, **5**: 89Heat of vaporization, **1**: 102; **7**: 246Isotopes, **1**: 47*J*-Phenomenon, **6**: 1Magnetic susceptibility, **6**: 355Melting point, **1**: 104Nernst effect, **6**: 420Peltier coefficient, **6**: 227

* Data for system will be found under this compound in Index. Full explanation on page vii.

Silicon.—(Continued)

- Persistent lines, **5**: 324
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 250
- Righi-Leduc effect, **6**: 421
- Specific heat, **1**: 104; **5**: 86, 89, 94
- Spectral series, **5**: 404
- Thermal conductivity, **5**: 217
 - Crystals, **5**: 231
- Thermal expansion, **1**: 104; **2**: 462
- Thermochemistry, **5**: 182
- Thermodynamic potential, **5**: 89
- Thermoelectric properties, **6**: 214
- Thomson coefficient, **6**: 228
- Vapor pressure, **3**: 205
- X-ray absorption limits, **6**: 36, 44
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 36
- X-rays, scattering, modification by, **6**: 17
- Zeeman effect, **5**: 420
- Aluminum*
- Aluminum*-Carbon-Iron
- Aluminum*-Chromium-Copper-Iron
- Aluminum*-Copper
- Aluminum*-Copper-Iron
- Aluminum*-Copper-Iron-Manganese
- Aluminum*-Copper-Iron-Manganese-Zinc
- Aluminum*-Copper-Iron-Nickel
- Aluminum*-Copper-Iron-Nickel-Zinc
- Aluminum*-Copper-Iron-Zinc
- Aluminum*-Copper-Magnesium
- Aluminum*-Copper-Magnesium-Nickel
- Aluminum*-Copper-Manganese
- Aluminum*-Iron
- Aluminum*-Magnesium
- Antimony*
- Arsenic*-Copper-Iron
- Bismuth*
- Calcium*
- Carbon*-Chromium-Iron
- Carbon*-Chromium-Iron-Manganese
- Carbon*-Chromium-Iron-Manganese-Molybdenum
- Carbon*-Chromium-Iron-Manganese-Tungsten
- Carbon*-Chromium-Iron-Nickel
- Carbon*-Cobalt-Iron-Manganese
- Carbon*-Copper-Iron-Manganese
- Carbon*-Iron
- Carbon*-Iron-Manganese
- Carbon*-Iron-Manganese-Nickel
- Carbon*-Iron-Manganese-Tungsten
- Carbon*-Iron-Molybdenum
- Carbon*-Iron-Nickel
- Cerium*
- Chromium*
- Chromium*-Iron
- Chromium*-Iron-Manganese
- Chromium*-Iron-Nickel
- Chromium*-Iron-Nickel-Vanadium
- Chromium*-Iron-Titanium
- Cobalt*
- Copper*
- Copper*-Iron
- Copper*-Iron-Manganese
- Copper*-Tin
- Gold*
- Iron*
- Iron*-Manganese
- Iron*-Manganese-Molybdenum-Nickel
- Iron*-Manganese-Nickel
- Iron*-Molybdenum-Nickel
- Iron*-Nickel
- Iron*-Tin
- Iron*-Vanadium
- Lithium*
- Magnesium*
- Manganese*
- Molybdenum*

Silicon.—(Continued)

- Nickel*
- Silver
 - Equilibrium diagram, **2**: 422
- Tantalum
 - Density, **2**: 594
- Thorium
 - Density, **2**: 594
- Titanium
 - Density, **2**: 594
 - Hardness, **2**: 593
- Tungsten
 - Density, **2**: 594
- Vanadium
 - Equilibrium diagram, **2**: 441
- Zirconium
 - Density, **2**: 594
 - Hardness, **2**: 593
- Silicon bronze
 - Electrical conductivity, **6**: 172
- Silicon carbide
 - Heat of formation, **5**: 182
 - Specific heat, **5**: 95
 - X-ray diffraction data, **1**: 341
 - See also Carborundum.
- Silicon manganese steel
 - Endurance limits, **2**: 604
 - Mechanical properties, **2**: 325
- Silicon nitride
 - Band spectra, **5**: 416
 - Heat of formation, **5**: 182
- Silicon oxide, band spectra, **5**: 416
- Silicon steel
 - Compression tests, **2**: 524
 - Electrical conductivity, **6**: 188
 - Heat treatment, effect of, **6**: 200
 - Hardness, **2**: 523, 524
 - Magnetic properties, **6**: 396–398
 - Tensile properties, **2**: 523, 524
 - Thermal expansion, **2**: 473, 474
 - Thermoelectric properties, **6**: 224
- Silicon sulfide
 - Heat of formation, **5**: 182
 - Lead sulfide*
 - Silver sulfide
 - Freezing point-solubility, **4**: 48
- Silicon tetrabromide
 - Boiling point, **1**: 112, 162
 - Density, **1**: 112; **3**: 23
 - Heat of formation, **5**: 182
 - Magnetic susceptibility, **6**: 356
 - Melting point, **1**: 112
 - Refractive index, **1**: 112, 166
- Silicon tetrachloride
 - Boiling point, **1**: 112, 162
 - Density, **1**: 112; **3**: 23
 - Dielectric constant, **6**: 76
 - Entropy, **7**: 247
 - Free energy, **7**: 247
 - Heat content, **7**: 247
 - Heat of formation, **5**: 182
 - Heat of fusion, **5**: 131
 - Heat of vaporization, **5**: 136
 - Magnetic susceptibility, **6**: 356
 - Melting point, **1**: 112
 - Melting point under pressure, **4**: 12
 - Polarization of light scattered by, **5**: 267
 - Refractive index, **1**: 112, 166
 - Specific heat
 - Gas, **5**: 80, 81
 - Liquid, **5**: 106
 - Solid, **5**: 95
 - Surface tension, **4**: 447
 - Vapor pressure
 - Liquid, **3**: 214
 - Solid, **3**: 207
 - Verdet constant, **6**: 426
 - Volume change on melting, **4**: 12
 - Chlorine*
- Silicon tetraethoxide
 - Magnetic susceptibility, **6**: 356

Silicon tetrafluoride

- Band spectra, **5**: 416
- Boiling point, **3**: 232
- Critical point data, **3**: 232, 248
- Density, gas, **3**: 3
- Heat of formation, **5**: 182
- Sound, velocity of, in, **6**: 462
- Triple point, **3**: 232
- Vapor pressure above 1 atm., **3**: 232

Silicon tetraiodide

- Heat of formation, **5**: 182

Silicon tetraphenyl

- Absorption spectra, **5**: 328
- Lead tetraphenyl*
 - Tetraphenylethylene
 - Freezing point-solubility, **4**: 197
 - Tetraphenyltin
 - Freezing point-solubility, **4**: 48

Silk

- Adsorption on, **3**: 253
- Cocoon threads, size of, **2**: 234
- Density, **2**: 237, 312
- Moisture content at various humidities, **2**: 237, 316, 323, 324
- Physical properties, **2**: 234
- Thermal conductivity, **2**: 312

Silk, artificial. See Rayon.**Silk, varnished**

- Dielectric strength, **2**: 310
- Tensile strength, **2**: 311

Silk industry, air conditioning in, 2: 322**Sillimanite**

- Crystallography, **2**: 68
- Density, **1**: 137
- Fusion temperature, **2**: 83
- Heat of formation, **5**: 194
- Refractive index, **1**: 137, 171; **7**: 22
- Specific heat, **5**: 101

Sillman bronze, 2: 383, 578**Silumin (alloy), 2: 383; cf. 543, 601****Silvel (alloy), 2: 383****Silver**

- Absorption, index of, **5**: 249, 251, 252
- Annealing temperature, **2**: 591
- Band spectra, **5**: 411
- Boiling point, **1**: 102; **3**: 205
- Cathodoluminescence, **5**: 389
- Compressibility, **3**: 46, 48
- Compton effect, **6**: 18
- Condensation, irreversible, temperature of, **5**: 54
- Contact potential, **6**: 57
- Corbino effect, **6**: 419
- Critical potentials, **6**: 70
- Density
 - Liquid, **1**: 102; **2**: 457, 463
 - Solid, **1**: 103; **2**: 456
- Elastic properties, **2**: 588
- Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 103; **6**: 136–138
 - Low temperature, **6**: 125, 131
 - Magnetic field, effect of, **6**: 421
- Electrode potential, **6**: 319; **7**: 265
- Electrons, secondary emission of, **6**: 63
- Electrons, transmitted, velocity of, **6**: 62
- Electrons excited by X-rays, number of, **6**: 5
- Electrons freed by X-rays, energy of, **6**: 3
- Emission, spectral, **5**: 242, 244, 253, 255
- Emission spectra, **5**: 280
- Entropy, **5**: 87
- Ettingshausen effect, **6**: 419
- Free energy
 - Electrode reaction, **7**: 265
 - Reaction with hydrogen sulfide, **7**: 272

Silver.—(Continued)

- Hall effect, **6**: 416, 417
- Heat content, **5**: 87
- Heat of fusion, **1**: 103; **2**: 458
- Heat of transformation, **2**: 458
- Heat of vaporization, **1**: 102
- Isotopes, **1**: 45
- J-Phenomenon, **6**: 1
- Magnetic susceptibility, **6**: 354
- Magneton number, **6**: 346
- Mechanical properties, **2**: 584
- Melting point, **1**: 53, 103
- Nernst effect, **6**: 420
- Oxygen, diffusion of, in, **5**: 77
- Oxygen, permeability to, **5**: 76
- Oxygen, solubility of, in, **3**: 270
- Peltier coefficient, **6**: 227
- Persistent lines, **5**: 323
- Photoconductivity, **6**: 66
- Photoelectric threshold, **6**: 68
- Quantum numbers, **5**: 408
- Refraction, index of, **5**: 249, 251, 252
- Righi-Leduc effect, **6**: 421
- Solubility in water, **4**: 40
- Solution velocity in aqueous solutions, **5**: 56–58
- Sound, velocity of, in, **6**: 465
- Specific heat
 - Liquid, **1**: 103; **5**: 94
 - Solid, **1**: 103; **5**: 85, 87, 92
- Spectral filter, use as, **5**: 273
- Spectral series, **5**: 393
- Surface tension, **4**: 439, 440
- Thermal conductivity, **5**: 218, 220
 - Magnetic field, effect of, **6**: 424
- Thermal expansion
 - Liquid, **1**: 102; **2**: 463
 - Solid, **1**: 103; **2**: 459
- Thermochemistry, **5**: 188
- Thermodynamic potential, **5**: 87
- Thermoelectric properties, **6**: 214, 225
- Thomson coefficient, **6**: 228
- Vapor pressure, **3**: 205
- Viscosity, **5**: 6, 7
- Volume change on fusion, **2**: 474
- X-radiation from target of, **6**: 47
- X-ray absorption limits, **6**: 38
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 38
- X-ray lines, relative intensities, **6**: 32
- X-ray lines, width of, **6**: 26
- X-ray series, limiting frequencies, **6**: 35
- X-ray wave-lengths, standard, **6**: 34
- X-rays
 - Absorption, discontinuity in, **6**: 12
 - Absorption coefficient, **6**: 13–15
 - Emission efficiency, **6**: 11
 - Refraction of, by, **6**: 50
 - Scattering, modification by, **6**: 17
- Zeeman effect, **5**: 420
- Aluminum*
- Aluminum*-Bismuth
- Aluminum*-Lead
- Antimony*
- Arsenic*
- Arsenic*-Copper-Oxygen
- Beryllium*
- Bismuth*
- Bismuth*-Zinc
- Cadmium*
- Cadmium*-Copper
- Calcium*
- Chromium*
- Copper*
- Copper*-Gold
- Copper*-Mercury-Tin
- Copper*-Nickel
- Gold*
- Gold*-Nickel
- Iodine*
- Iron*

Silver.—(Continued)

- Lead*
- Lead*-Zinc
- Magnesium*
- Manganese*
- Mercuric oxide*
- Mercury*
- Mercury*-Zinc
- Nickel*
- Palladium*
- Platinum*
- Selenium*
- Silicon*
- Silver chloride
 - Solubility, mutual, **3**: 393
- Silver fluoride
 - Freezing point-solubility, **4**: 40
- Sodium
 - Equilibrium diagram, **2**: 422
- Sulfur
 - Freezing point-solubility, **4**: 25
- Tellurium
 - Electrical conductivity, **6**: 196
 - Freezing point-solubility, **4**: 29
 - Hardness, **2**: 585
 - Specific heat, **5**: 120
- Thallium
 - Absorption, index of, **5**: 251
 - Electrical conductivity, **6**: 161
 - Equilibrium diagram, **2**: 423
 - Refraction, index of, **5**: 251
 - Thermal conductivity, **5**: 222
 - Thermoelectric properties, **6**: 216
- Tin
 - Absorption, index of, **5**: 251
 - Density, **2**: 589
 - Electrical conductivity, **6**: 161
 - Equilibrium diagram, **2**: 416
 - Peltier coefficient, **6**: 227
 - Refraction, index of, **5**: 251
 - Thermal conductivity, **5**: 222
 - Thermoelectric properties, **6**: 216
- Zinc
 - Density, **2**: 589
 - Equilibrium diagram, **2**: 423
 - Thermal conductivity, **5**: 222
 - X-ray diffraction data, **1**: 348
- Silver acetate
 - Density, aqueous solution, **3**: 67
 - Electrical conductivity, aqueous solution, **6**: 244, 257
 - Heat of formation, **5**: 189
 - Precipitation, **1**: 354
 - Solubility in water, **4**: 223
 - Transference number, **6**: 309
- Acetic acid*
- Cadmium acetate*
- Lead acetate*
- Nitric acid*
- Potassium acetate*
- Silver butyrate
 - Solubility in water, **7**: 324
- Silver nitrate
 - Solubility in water, **7**: 323
- Silver sulfate
 - Density, aqueous solution, **3**: 98
- Silver valerate
 - Solubility in water, **7**: 324
- Sodium acetate
 - Solubility in water, **7**: 323
- Silver alloys, list of, **2**: 390
- Silver arsenate, X-ray diffraction data, **1**: 342
- Silver benzenesulfonate
 - Electrical conductivity, aqueous solution, **6**: 244
 - Transference number, **6**: 310
- Silver benzoate
 - Solubility in water, **4**: 224
- Chloroacetic acid*
- Nitric acid*

Silver bicarbonate

- Free energy of ionization, **7**: 270
- Ionization constant, **7**: 270

Silver bromate

- Ammine, decomposition pressure, **7**: 268
- Density, **1**: 124
- Electrical conductivity, aqueous solution, **6**: 256
- Free energy of ionization, **7**: 268
- Ionization constant, **7**: 268
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 124, 167
- Solubility in water, **4**: 223; **6**: 256
- Transition temperature, **4**: 7
- Acetic acid*
- Barium nitrate*
- Cerous nitrate*
- Magnesium nitrate*
- Magnesium sulfate*
- Potassium bromate*
- Potassium nitrate*
- Potassium perchlorate*
- Potassium sulfate*
- Silver nitrate
 - Solubility in water, **7**: 322
- Sodium sulfate
 - Solubility in water, **7**: 322

Silver bromide

- Ammine
 - Decomposition pressure, **7**: 268
 - Heat of formation, **5**: 189
- Band spectra, **5**: 411
- Compressibility, **3**: 50
- Cyanide ion, reaction with, **7**: 271
- Density, liquid, **3**: 23
- Dielectric constant, **6**: 76, 99
- Electrical conductivity, **6**: 148
 - Aqueous solution, **6**: 256
- Electrode potential, **7**: 267
- Free energy, **7**: 267
- Heat of dissociation, **5**: 418
- Heat of formation, **5**: 188
- Heat of fusion, **5**: 131
- Magnetic susceptibility, **6**: 357
- Methylamine complex
 - Decomposition pressure, **7**: 268
 - Heat of formation, **5**: 189
- Photoconductivity, **6**: 66
- Photoelectric current, **6**: 69
- Reduction, electrode potential, **7**: 267
- Refractive index, **7**: 13
- Residual rays, **5**: 261
- Solubility in water, **6**: 256
- Specific heat
 - Liquid, **5**: 106
 - Solid, **5**: 97
- Sulfite ion, equilibrium constant, **7**: 269
- Surface tension, **4**: 442
- Thermal conductivity, **5**: 216, 217, 231
- Thermal expansion, **3**: 43
- Thiocyanate ion, reaction with, **7**: 270
- Transmission of radiant energy, **5**: 270
- Viscosity, **7**: 212
- X-ray diffraction data, **1**: 342
- See also Bromyrite.
- Aluminum bromide*
- Ammonia*
- Ammonium hydroxide*
- Cadmium sulfate*
- Lead*
- Lead amalgam*
- Lead bromide*
- Lithium bromide*
- Mercuric bromide*
- Mercuric chloride*
- Piperidine*
- Potassium bromide*
- Potassium thiocyanate*
- Rubidium bromide*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Silver bromide.—(Continued)*-Silver chloride*

- Electrical conductivity, **6**: 151
- Freezing point-solubility, **4**: 58
- X-ray diffraction data, **1**: 352

-Silver chloride-Silver iodide

- Freezing point-solubility, **4**: 75, 81

-Silver iodide

- Freezing point-solubility, **4**: 58
- X-ray diffraction data, **1**: 352

-Silver nitrate

- Freezing point-solubility, **4**: 58

-Sodium bromide

- Freezing point-solubility, **4**: 59

Silver butyrate

- Solubility in water, **4**: 223

*-Silver acetate***-Silver nitrate*

- Solubility in water, **7**: 324

-Sodium butyrate

- Solubility in water, **7**: 324

Silver carbide, heat of formation, **5**: 189**Silver carbonate**

- Decomposition pressure, **7**: 273

- Heat of formation, **5**: 189

Silver chlorate

- Ammine, decomposition pressure, **7**: 267

Density

- Aqueous solution, **3**: 67
- Liquid, **3**: 23

Electrical conductivity, **6**: 148

- Aqueous solution, **6**: 244

Heat of formation, **5**: 188**Reflectivity**, selective, **5**: 260**Solubility in water**, **4**: 223**Transference number**, **6**: 309*-Sodium chlorate*

- Freezing point-solubility, **4**: 58

Silver chloride**Ammine**

- Decomposition pressure, **7**: 267
- Heat of decomposition, **7**: 267
- Heat of formation, **5**: 188

Bromide ion, reaction with, **7**: 267**Compressibility**, **3**: 50**Concentration cell**, **6**: 326**Cyanide ion**, reaction with, **7**: 270**Density**, liquid, **3**: 23**Dielectric constant**, **6**: 76, 99**Electrical conductivity**, **6**: 148

- Aqueous solution, **6**: 256

Electrode potential, **7**: 265**Entropy**, **5**: 90**Free energy**, **7**: 265

- Fusion, **7**: 267

Heat content, **5**: 90**Heat of formation**, **5**: 188**Heat of fusion**, **5**: 131; **7**: 267**Hydroxide ion**, equilibrium constant, **7**: 272**Magnetic susceptibility**, **6**: 357**Methylamine complex**

- Decomposition pressure, **7**: 267
- Heat of formation, **5**: 189

Photoconductivity, **6**: 66**Photoelectric current**, **6**: 69**Reduction**, electrode potential, **7**: 266**Refractive index**, **7**: 13**Residual rays**, **5**: 261**Solubility in**

- Antimony trichloride, **4**: 47
- Hydrochloric acid, **7**: 266
- Nitric acid, **7**: 266
- Water, **6**: 256

Specific heat

- Liquid, **5**: 106
- Solid, **5**: 90, 97

Sulfite ion, equilibrium constant, **7**: 269**Surface tension**, **4**: 442**Silver chloride.—(Continued)****Thermal conductivity**, **5**: 216, 217, 231**Thermal expansion**, **3**: 43**Thermodynamic potential**, **5**: 90**Thiocyanate ion**, reaction with, **7**: 270**Transmission of radiant energy**, **5**: 270**Vapor pressure**, **3**: 214; **7**: 265**Viscosity**, **7**: 212**X-ray diffraction data**, **1**: 342*See also Cerargyrite.**-Aluminum chloride***-Ammonia***-Ammonium chloride***-Ammonium hydroxide***-Barium chloride***-Beryllium chloride***-Bismuth chloride***-Cadmium amalgams***-Calcium chloride***-Cesium chloride***-Cuprous chloride***-Hydrogen cyanide***-Lead***-Lead amalgam***-Lead chloride***-Lithium chloride***-Magnesium chloride***-Mercuric chloride***-Mercury***-Piperidine***-Potassium chloride***-Potassium hydroxide***-Potassium nitrate***-Rubidium chloride***-Silver***-Silver bromide***-Silver bromide*-Silver iodide**-Silver iodide***Freezing point-solubility**, **4**: 58*-Silver nitrate***Freezing point-solubility**, **4**: 58**Freezing point-solubility in water**, **4**: 290*-Silver sulfide***Freezing point-solubility**, **4**: 58*-Sodium chloride***Freezing point-solubility**, **4**: 58**X-ray diffraction data**, **1**: 352*-Thallium amalgam***Electrode potential**, **7**: 266*-Thallium monochloride***Electrical conductivity**, **6**: 150**Freezing point-solubility**, **4**: 53**Silver chloroacetate****Density**, aqueous solution, **3**: 67**Solubility in water**, **4**: 224*-Nitric acid***-Silver nitrate***Solubility in water**, **7**: 324*-Sodium chloroacetate***Solubility in water**, **7**: 324**Silver chloroplatinate****Heat of formation**, **5**: 190**Silver chromate****Electrical conductivity**, aqueous solution, **6**: 257**Hydrogen ion**, reaction with, **7**: 287**Reflectivity**, selective, **5**: 260**Solubility in water**, **4**: 226*-Ammonium hydroxide***-Ethyl alcohol***-Nitric acid****Silver cyanate****Heat of formation**, **5**: 189**Specific heat**, **5**: 97**Silver cyanide****Ammine**, decomposition pressure, **7**: 270**Dielectric constant**, **6**: 76**Electrical conductivity**, aqueous solution, **6**: 257**Free energy**, **7**: 270**Silver cyanide.—(Continued)****Heat of formation**, **5**: 189**Residual rays**, **5**: 261**Specific heat**, **5**: 97*-Hydrogen cyanide***-Potassium cyanide***-Pyridine***-Sodium cyanide***Freezing point-solubility**, **4**: 59**Silver cyanurate****Specific heat**, **5**: 97**Silver dichromate****Electrical conductivity**, aqueous solution, **6**: 257**Reflectivity**, selective, **5**: 260*-Silver sulfate***Freezing point-solubility in water**, **4**: 341**Silver dithionate****Density**, **1**: 124**Electrical conductivity**, aqueous solution, **6**: 244**Heat of formation**, **5**: 188**Refractive index**, **1**: 124, 172; **7**: 21**Transference number**, **6**: 309**Silver ethyl sulfate****Electrical conductivity**, aqueous solution, **6**: 236**Transference number**, **6**: 310**Silver fluoride****Density**, aqueous solution, **3**: 67**Electrical conductivity**, aqueous solution, **6**: 231, 232**Heat of formation**, **5**: 188**Refractive index**, aqueous solution, **7**: 70**Solubility in water**, **4**: 223, 245*-Hydrogen fluoride***-Silver****Silver fluosilicate****Electrical conductivity**, **6**: 244**Transference number**, **6**: 309**Silver halides****Photochemical equivalent**, **5**: 439**Silver hydrogen phosphate****Refractive index**, **1**: 124, 167**Silver hydrogen sulfate**, electrical conductivity, aqueous solution, **6**: 244**Silver hydroxide**, electrical conductivity aqueous solution, **6**: 257, 260**Silver iodate****Chromate ion**, equilibrium constant of reaction, **7**: 287**Electrical conductivity**, aqueous solution, **6**: 256**Free energy of ionization**, **7**: 269**Ionization constant**, **7**: 269**Solubility in water**, **4**: 223; **6**: 256*-Iodine***-Nitric acid****Silver iodide****Adsorption of potassium iodide on**, **3**: 252**Allotropic forms**, **4**: 12**Ammine****Decomposition pressure**, **7**: 268**Heat of decomposition**, **7**: 268**Heat of formation**, **5**: 189**Band spectra**, **5**: 411**Compressibility**, **3**: 50**Concentration cell**, **6**: 326**Cyanide ion**, reaction with, **7**: 271**Density**, liquid, **3**: 23**Electrical conductivity**, **6**: 148**Aqueous solution**, **6**: 256**Electrode potential**, **7**: 268**Entropy**, **5**: 90**Free energy**, **7**: 268**Free energy of allotropic transformation**, **7**: 268**Heat content**, **5**: 90**Heat of dissociation**, **5**: 418

Silver iodide.—(Continued)

- Heat of formation, **5**: 188
- Heat of transition, **5**: 188
- Magnetic susceptibility, **6**: 357
- Melting point under pressure, **4**: 12
- Methylamine complex
 - Decomposition pressure, **7**: 269
 - Heat of formation, **5**: 189
- Photoconductivity, **6**: 66
- Photoelectric current, **6**: 69
- Refractive index, **7**: 13, 21
- Solubility in water, **6**: 256
- Specific heat, **5**: 90, 97
- Thermal expansion, **3**: 44
- Thermodynamic potential, **5**: 90
- Transition temperature, **4**: 7
- Transmission of radiant energy, **5**: 270
- Triple points, **4**: 12
- Viscosity, **7**: 212
- Volume change on melting, **4**: 12
- X-ray diffraction data, **1**: 342
- Ammonia*
- Cadmium amalgams*
- Cuprous iodide*
- Dimethylamine*
- Hydrogen sulfide*
- Lead*
- Lead amalgam*
- Lead iodide*
- Lithium iodide*
- Mercuric chloride*
- Mercuric iodide*
- Methylamine*
- Piperidine*
- Potassium iodide*
- Potassium thiocyanate*
- Rubidium iodide*
- Silver bromide*
- Silver bromide*-Silver chloride
- Silver chloride*
- Silver nitrate
 - Density, **3**: 134
 - Freezing point-solubility, **4**: 59, 78
 - Solubility in water, **7**: 268
- Sodium cyanide
 - Solubility in water, **7**: 271
- Sodium iodide
 - Freezing point-solubility, **4**: 59

Silver ion

- Bicarbonate ion, reaction with, **7**: 272
- Reaction with nitrogen bases, **7**: 271
- Thiosulfate ion, equilibrium constant, **7**: 269

Silver isobutyrate

- Solubility in water, **4**: 223

Silver isovalerate

- Solubility in water, **4**: 224

Silver malate, solubility in water, 4: 223**Silver manganate**

- Ammine, decomposition pressure, **7**: 272
- Electrical conductivity, aqueous solution, **6**: 244

Silver metaphosphate, electrical conductivity, aqueous solution, 6: 244**Silver methylethylacetate**

- Solubility in water, **4**: 223

Silver molybdate

- X-ray diffraction data, **1**: 343

Silver naphthalenesulfonate

- Electrical conductivity, aqueous solution, **6**: 244
- Transference number, **6**: 310

Silver nitrate

- Absorption spectra, solutions, **5**: 327, 328
- Ammine
 - Decomposition pressure, **7**: 269
 - Heat of formation, **5**: 188
- Boiling point elevation in aqueous solution, **3**: 325

Silver nitrate.—(Continued)

- Compressibility, **3**: 50
- Compressibility differences, **4**: 12
- Concentration cells, **6**: 326
- Density
 - Aqueous solution, **3**: 67; **7**: 70
 - Liquid, **3**: 23
 - Solid, **1**: 124
- Diffusion in ethyl alcohol, **5**: 73
- Diffusion in water, **5**: 65
- Electrical conductivity, **6**: 148
 - Aqueous solution, **6**: 231, 237, 240
- Freezing point lowering of aqueous solution, **4**: 256
- Heat of formation, **5**: 188
- Heat of fusion, **5**: 131
- Heat of transition, **5**: 188
- Melting point, **1**: 124
- Melting point under pressure, **4**: 12, 17
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 124, 174
 - Aqueous solution, **7**: 70
- Solubility in water, **4**: 223
- Specific heat
 - Aqueous solution, **5**: 122
 - Liquid, **5**: 106
 - Solid, **5**: 97
- Surface tension, aqueous solution, **4**: 464
- Thermal expansion, **3**: 44
- Transference number, **6**: 310
- Transition temperature, **4**: 7
- Vapor pressure, aqueous solution, **3**: 367
- Vapor pressure lowering in aqueous solution, **3**: 294
- Verdet constant, aqueous solution, **6**: 426
- Viscosity, **7**: 212
 - Aqueous solution, **5**: 14
- Volume change on melting, **4**: 12
- X-rays, absorption coefficient, **6**: 13
- Acetic acid*
- Acetone*
- Acetone*-Ethyl alcohol
- Acetonitrile*
- Acetonitrile*-Pyridine
- Ammonia*
- Ammonium nitrate*
- Ammonium nitrate*-Ethyl alcohol
- Aniline*
- Aniline*-Pyridine
- Benzonitrile*
- Chloroacetic acid*
- m-Chloroaniline*
- Cupric nitrate*
- Ethyl alcohol*
- Ethyl alcohol*-Potassium nitrate
- Ethylamine*
- Lithium nitrate*
- Methylamine*
- Nitric acid*
- Piperidine*
- Potassium bromide*
- Potassium chloride*
- Potassium cyanide*
- Potassium iodide*
- Potassium nitrate*
- Propylamine*
- Pyridine*
- Quinoline*
- Silver acetate*
- Silver bromate*
- Silver bromide*
- Silver butyrate*
- Silver chloride*
- Silver chloroacetate*
- Silver iodide*
- Silver nitrite
 - Solubility in water, **7**: 323
- Silver propionate
 - Solubility in water, **7**: 324

Silver nitrate.—(Continued)

- Silver sulfate
 - Density, aqueous solution, **3**: 98
 - Solubility in water, **7**: 325
- Silver sulfide
 - Solubility in water, **7**: 273
- Silver valerate
 - Solubility in water, **7**: 324
- Sodium nitrate
 - Density, **3**: 134
 - Freezing point-solubility, **4**: 59
- Succinonitrile
 - Miscibility in water, **3**: 414
- Thallous nitrate
 - Electrical conductivity, **6**: 150
 - Freezing point-solubility, **4**: 54
 - Surface tension, aqueous solution, **4**: 470
- Silver nitride, heat of formation, **5**: 188
- Silver nitrite
 - Ammine, decomposition pressure, **7**: 269
 - Concentration cell, **6**: 326
 - Decomposition pressure, **7**: 269
 - Electrical conductivity, aqueous solution, **6**: 244
 - Free energy, **7**: 269
 - Decomposition, **7**: 269
 - Ionization, **7**: 269
 - Heat of formation, **5**: 188
 - Ionization constant, **7**: 269
 - Solubility in water, **4**: 223
 - Transference number, **6**: 309
- Barium nitrite*
- Calcium nitrite*
- Iodine*
- Lithium nitrite*
- Potassium nitrite*
- Silver nitrate*
- Sodium nitrite
 - Freezing point-solubility in water, **4**: 357, 391
- Strontium nitrite
 - Freezing point-solubility in water, **4**: 356, 391
- Silver oxalate
 - Heat of formation, **5**: 189
- Nitric acid*
- Silver oxide
 - Decomposition pressure, **7**: 272
 - Free energy, **7**: 272
 - Formation, **7**: 272
 - Reaction with water, **7**: 272
 - Heat of formation, **5**: 188; **7**: 272
 - Reduction with hydrogen, **7**: 272
 - Solubility in water, **4**: 223
 - Vapor pressure, **3**: 208
 - X-ray diffraction data, **1**: 342
- Ammonium hydroxide*
- Carbon dioxide*
- Ethyl alcohol*
- Silver perchlorate
 - Ammine
 - Decomposition pressure, **7**: 267
 - Heat of formation, **5**: 189
 - Electrical conductivity, aqueous solution, **6**: 244
 - Heat of formation, **5**: 188
 - Solubility in water, **4**: 223
 - Transference number, **6**: 309
 - Transition temperature, **4**: 7
 - Aniline*
 - Benzene*
 - Pyridine*
 - Toluene
 - Freezing point-solubility, **4**: 200
- Silver peroxide, heat of formation, **5**: 188
- Silver phosphate
 - Electrical conductivity, aqueous solution, **6**: 257
 - X-ray diffraction data, **1**: 342

* Data for system will be found under this compound in Index. Full explanation on page vii.

Silver phosphideDecomposition pressure, **7**: 270**Silver propionate**Electrical conductivity, aqueous solution, **6**: 257Solubility in water, **4**: 223

-Propionic acid*

-Silver nitrate*

-Sodium propionate

Solubility in water, **7**: 324**Silver pseudocumenesulfonate**Electrical conductivity, aqueous solution, **6**: 244Transference number, **6**: 310**Silver pyrophosphate**Reflectivity, selective, **5**: 260**Silver selenate**Density, aqueous solution, **3**: 67Heat of formation, **5**: 188**Silver selenide**Heat of formation, **5**: 188Heat of transition, **5**: 188Specific heat, **5**: 97Transition temperature, **4**: 7

-Antimony monoselenide*

-Antimony tetraselenide*

-Antimony triselenide*

-Arsenous selenide*

-Bismuth sulfide*

-Silver sulfide

Freezing point-solubility, **4**: 59**Silver sulfate**Absorption spectra, solutions, **5**: 328Boiling point elevation in aqueous solution, **3**: 325Decomposition pressure, **7**: 272Density, aqueous solution, **3**: 67Electrical conductivity, aqueous solution, **6**: 236Heat of formation, **5**: 188Precipitation, **1**: 354Solubility in water, **4**: 223Transition temperature, **4**: 7

-Ammonium sulfate*

-Calcium sulfate*

-Calcium sulfate*-Potassium sulfate

-Lithium sulfate*

-Magnesium nitrate*

-Magnesium sulfate*

-Nitric acid*

-Potassium hydrogen sulfate*

-Potassium nitrate*

-Potassium sulfate*

-Silver acetate*

-Silver dichromate*

-Silver nitrate*

-Sodium sulfate

Freezing point-solubility, **4**: 59, 79Freezing point-solubility in water, **4**: 341; **7**: 325

-Sulfuric acid

Freezing point-solubility, **4**: 43Freezing point-solubility in water, **4**: 341; **7**: 324**Silver sulfide**Adsorption on, **3**: 252Compressibility, **3**: 50Electrical conductivity, **6**: 148Free energy of allotropic transformation, **7**: 272Heat of allotropic transformation, **7**: 272Heat of formation, **5**: 188Heat of transition, **5**: 188Photoconductivity, **6**: 66Photoelectric current, **6**: 69Specific heat, **5**: 97Transition temperature, **4**: 7

See also Acanthite.

-Antimony trisulfide*

-Arsenous sulfide*

Silver sulfide.—(Continued)

-Cuprous sulfide*

-Ferrous sulfide*

-Lead sulfide*

-Silicon sulfide*

-Silver chloride*

-Silver nitrate*

-Silver selenide*

-Thallium sulfide

Freezing point-solubility, **4**: 54

-Zinc sulfide

Freezing point-solubility, **4**: 55**Silver tartrate**Electrical conductivity, aqueous solution, **6**: 257Heat of formation, **5**: 189Solubility in water, **4**: 223**Silver telluride**

See Hessite.

-Gold ditelluride*

Silver thallium nitrateDensity, aqueous solution, **3**: 67Viscosity, aqueous solution, **5**: 14**Silver thiocyanate**Concentration cell, **6**: 326Electrical conductivity, aqueous solution, **6**: 256Heat of formation, **5**: 189Solubility in water, **6**: 256

-Potassium thiocyanate*

-Pyridine*

Silver p-toluate, electrical conductivity, aqueous solution, **6**: 257**Silver trimethylacetate**Solubility in water, **4**: 223**Silver valerate**Solubility in water, **4**: 223

-Silver acetate*

-Silver nitrate*

-Sodium valerate

Solubility in water, **7**: 324**Silverine (alloy), 2: 383**Electrical conductivity, **6**: 169**Silverite (alloy), 2: 383****Silveroid (alloy), 2: 383****Similargent (alloy), 2: 383****Similor (alloy), 2: 383; cf. 555****Sin-chu (alloy), 2: 383; cf. 469, 555****Singing tube, 6: 456****Siren, 6: 456****Sisal, 2: 235, 236****Siserskite (alloy), 2: 381****Sitosterol**, optical rotatory power, **7**: 464**Skin friction**, coefficient of, conversion factors, **1**: 24**Skutterudite**, density, **1**: 131**Sky**, brightness, **5**: 247**Slag**, brightness temperature, **5**: 245**Slag wool**Density, **2**: 312Thermal conductivity, **2**: 312**Slate**Bulk density, **2**: 53Compressive strength, **2**: 48Density, **2**: 311Dielectric constant, **2**: 310Dielectric strength, **2**: 310Elasticity, **2**: 52Electrical conductivity, **2**: 310Gamma rays, absorption coefficient, **6**: 21Hardness, **2**: 50Impact hardness, **2**: 50Power factor, **2**: 310Shearing strength, **2**: 49Sound, velocity of, in, **6**: 466Strength properties, **2**: 311Tensile strength, **2**: 49Thermal conductivity, **2**: 311, 315Thermal expansion, **2**: 54, 311**Slug, 1: 41****Smaltite**Density, **1**: 131Thermal expansion, **3**: 45**Smithite**Density, **1**: 124Refractive index, **1**: 124, 174**Smithsonite**Density, **1**: 119Dielectric constant, **6**: 99Refractive index, **1**: 119, 167Solution velocity in acids, **5**: 58, 59Thermal conductivity, **5**: 232

See also Zinc carbonate.

Smitter Lenian (alloy), 2: 383**Snow**Albedo, **5**: 262Density, **2**: 313Thermal conductivity, **2**: 313; **5**: 216, 217Thermal diffusivity, **2**: 315**Soap films, 4: 477****Soap solutions**Density, **5**: 447Electrical conductivity, **5**: 458Phase equilibria, **5**: 451Properties, **5**: 446Refractive index, **5**: 456Surface tension, **5**: 449**Soaps**Boiling point elevation in water, **5**: 456Freezing-point lowering in water, **5**: 456Hydration, **5**: 458Hydrolysis, **5**: 459Moisture content at various humidities, **2**: 325Properties, **5**: 446Solubility in water, **5**: 454**Soapstone**Compressive strength, **2**: 311Density, **2**: 311Dielectric strength, **2**: 310Electrical conductivity, **2**: 310

See also Steatite.

Soda niter. See Sodium nitrate.**Sodalite**Density, **1**: 153Refractive index, **1**: 153, 165**Soddite**, density, **1**: 134**Sodium**Absorption, index of, **5**: 250Absorption spectra, solutions, **5**: 329Band spectra, **5**: 415Boiling point, **1**: 102; **3**: 205Cathodoluminescence, **5**: 388, 390Compressibility, **3**: 47Contact potential, **6**: 57Critical potentials, **6**: 71

Density

Liquid, **1**: 102; **2**: 457, 463Solid, **1**: 104; **2**: 456Electrical conductivity, **1**: 103, 104; **6**: 136, 137Low temperature, **6**: 127, 133Electrode potential, **6**: 320, 332; **7**: 303Emission, spectral, **5**: 253Emission spectra, **5**: 305Entropy, **5**: 88Fluorescence of vapor, **5**: 391Free energy of electrode reaction, **7**: 303Hall effect, **6**: 416Hardness, **2**: 592Heat content, **5**: 88Heat of dissociation, **5**: 418Heat of fusion, **1**: 104; **2**: 458Heat of vaporization, **1**: 102Isotopes, **1**: 47Magnetic susceptibility, **6**: 355Magnetron number, **6**: 346Melting point, **1**: 104Persistent lines, **5**: 323Photoelectric current, **6**: 67

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium.—(Continued)

Photoelectric sensitivity, wave length for maximum, **6**: 68
 Photoelectric threshold, **6**: 68
 Photoelectric work function, **6**: 57
 Quantum numbers, **5**: 408
 Refractive index, **1**: 103; **5**: 250
 Solubility in sodium hydroxide, **4**: 40
 Specific heat
 Gas, **5**: 80
 Liquid, **1**: 103; **5**: 94
 Solid, **1**: 104; **5**: 85, 88, 93
 Spectral series, **5**: 401
 Surface tension, **4**: 440
 Thermal conductivity, **5**: 220, 221
 Thermal expansion
 Liquid, **1**: 102; **2**: 463
 Solid, **1**: 104; **2**: 461
 Thermochemistry, **5**: 200
 Thermodynamic potential, **5**: 88
 Thermoelectric properties, **6**: 214
 Vapor pressure, **3**: 205
 Volume change on fusion, **2**: 474
 X-radiation, scattered, distribution of, **6**: 19
 X-ray crystal structure, **1**: 340
 X-ray emission spectra, **6**: 36
 X-rays, absorption coefficient, **6**: 13
 X-rays, scattering, modification by, **6**: 17
 X-rays, scattering of, **6**: 17
 Zeeman effect, **5**: 420
 -Ammonia*
 -Antimony*
 -Bismuth*
 -Cadmium*
 -Cesium*
 -Gold*
 -Lead*
 -Lithium*
 -Magnesium*
 -Mercury*
 -Potassium*
 -Rubidium*
 -Silver*
 -Sulfur
 Freezing point-solubility, **4**: 26
 -Tellurium
 Freezing point-solubility, **4**: 29
 Partial vapor pressure, **3**: 284
 -Thallium
 Electrical conductivity, **6**: 198
 Equilibrium diagram, **2**: 438
 -Tin
 Electrical conductivity, **6**: 200
 -Zinc
 Equilibrium diagram, **2**: 439
Sodium acetate
 Acetic acid complexes, decomposition pressure, **7**: 304
 Boiling point elevation in aqueous solution, **3**: 326
 Crystallography, **1**: 322
 Decomposition pressure of hydrates, **7**: 304
 Density, **1**: 151
 Aqueous solution, **3**: 83, 105, 108; **7**: 74
 Dielectric constant, aqueous solution, **6**: 104
 Diffusion in ethyl alcohol, **5**: 73
 Diffusion in methyl alcohol, **5**: 72
 Diffusion in water, **5**: 67
 Electrical conductivity, **6**: 149
 Aqueous solution, **6**: 241, 248, 254
 Freezing mixtures, use in, **1**: 63
 Freezing point lowering of aqueous solution, **4**: 259
 Heat of formation, **5**: 202
 Magnetic susceptibility, **6**: 360
 Melting point, **1**: 151

Sodium acetate.—(Continued)

Refractive index, **1**: 151, 168
 Aqueous solution, **7**: 74
 Solubility in
 Ethyl ether-water, **3**: 415
 Water, **4**: 237
 Specific heat
 Aqueous solution, **5**: 124
 Liquid, **5**: 106
 Solid, **5**: 100
 Surface tension, **4**: 444
 Aqueous solution, **4**: 466
 Thermal conductivity, aqueous solution, **5**: 229
 Vapor pressure, aqueous solution, **3**: 372
 Vapor pressure lowering in aqueous solution, **3**: 297
 Viscosity, aqueous solution, **5**: 15
 -Acetic acid*
 -Ammonia*
 -Barium chloride*
 -Butyric acid*
 -Diethyl tartrate*
 -Ethyl alcohol*
 -Ethyl ether*
 -Isobutyric acid*
 -Lead azide*
 -Lead sulfate*
 -Methyl alcohol*
 -Potassium acetate*
 -Silver acetate*
 -Sodium antimonate
 Freezing point-solubility in water, **4**: 423
 -Sodium sulfate
 Freezing point-solubility in water, **4**: 336
 -Thallium monochloride
 Solubility in water, **7**: 321
Sodium acetylenedicarboxylate
 Density, aqueous solution, **3**: 83
 Viscosity, aqueous solution, **5**: 15
Sodium adipate
 Density, aqueous solution, **3**: 85
 Viscosity, aqueous solution, **5**: 16
Sodium aluminate
 Heat of formation, **5**: 203
 Melting point, **4**: 85
Sodium amalgam concentration cell
 Electromotive force, **7**: 303
Sodium amalgams
 Partial vapor pressure, **3**: 284
Sodium amide
 Electrical conductivity, **6**: 149
 Heat of formation, **5**: 201
 -Potassium amide*
Sodium o-aminobenzenesulfonate
 Electrical conductivity, aqueous solution, **6**: 250
Sodium o-aminobenzoate, electrical conductivity, aqueous solution, **6**: 250
Sodium m-aminobenzoate
 -Formamide*
Sodium anisate
 Density, aqueous solution, **3**: 84
 Viscosity, aqueous solution, **5**: 16
Sodium antimoniate
 Heat of formation, **5**: 202
 -Ethyl alcohol*
 -Sodium acetate*
Sodium arsenate
 Absorption spectra, solutions, **5**: 329
 Density, **1**: 151
 Aqueous solution, **3**: 82
 Electrical conductivity, aqueous solution, **6**: 248
 Heat of formation, **5**: 202
 Magnetic susceptibility, **6**: 360
 Refractive index, **1**: 151, 166; **7**: 26
 Solubility in water, **4**: 237

Sodium arsenate.—(Continued)

-Arsenic acid*
 -Arsenic pentoxide*
 -Potassium arsenate*
Sodium arsenate fluoride
 Density, aqueous solution, **3**: 105
Sodium arsenite
 Absorption spectra, solutions, **5**: 329
 Electrical conductivity, aqueous solution, **6**: 248
 -Potassium arsenite*
Sodium azelate
 Density, aqueous solution, **3**: 85
 Viscosity, aqueous solution, **5**: 16
Sodium azide
 Crystallography, **3**: 345
 Electrical conductivity, aqueous solution, **6**: 254
 Refractive index, aqueous solution, **7**: 74
 Viscosity, aqueous solution, **5**: 15
 -Lead acetate*
 -Lead nitrate*
Sodium benzenepentacarboxylate
 Density, aqueous solution, **3**: 85
 Electrical conductivity, aqueous solution, **6**: 241, 249
 Viscosity, aqueous solution, **5**: 16
Sodium benzenesulfonate
 Density, aqueous solution, **3**: 85, 105
 Diffusion in water, **5**: 67
 -Formamide*
Sodium benzoate
 Density, aqueous solution, **3**: 84, 105; **7**: 74
 Electrical conductivity, aqueous solution, **6**: 249
 Heat of solution in water, **5**: 150
 Refractive index, aqueous solution, **7**: 74
 Solubility in water, **4**: 238
 Viscosity, aqueous solution, **5**: 16
 -Benzoic acid*
 -Caffeine*
 -Ethyl alcohol*
 -Formamide*
 -Methyl alcohol*
Sodium bicarbonate
 Decomposition pressure, **7**: 305
 Density, aqueous solution, **3**: 83
 Dielectric constant, aqueous solution, **6**: 104
 Electrical conductivity, aqueous solution, **6**: 241, 248
 Freezing point lowering of aqueous solution, **4**: 259
 Heat of formation, **5**: 202
 Magnetic susceptibility, **6**: 360
 Refractive index, aqueous solution, **7**: 74
 Solubility in water, **4**: 237
 Surface tension, aqueous solution, **4**: 466
 Viscosity, aqueous solution, **5**: 15
 -Ammonium bicarbonate*
 -Ammonium bicarbonate*-Ammonium nitrate
 -Ammonium bicarbonate*-Sodium nitrate
 -Ammonium chloride*
 -Ammonium nitrate*
 -Ammonium nitrate*-Sodium nitrate
 -Ammonium sulfate*
 -Cupric chloride*-Sodium carbonate
 -Sodium carbonate
 Freezing point-solubility in water, **4**: 371, 393
 -Sodium carbonate-Sodium chloride
 Freezing point-solubility in water, **4**: 299, 385

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium bicarbonate.—(Continued)

-Sodium chloride

Density, aqueous solution, **3**: 99Freezing point-solubility in water, **4**: 302

-Sodium nitrate

Density, aqueous solution, **3**: 99

-Sodium sulfate

Freezing point-solubility in water, **4**: 335

-Sucrose

Surface tension, aqueous solution, **4**: 470**Sodium bisulfite**Absorption spectra, **5**: 329, 330Electrical conductivity, aqueous solution, **6**: 247Heat of formation, **5**: 201**Sodium borate**, specific heat, **5**: 100**Sodium bromate**Absorption spectra, solutions, **5**: 329Density, **1**: 150Aqueous solution, **3**: 81Dielectric constant, **6**: 77Electrical conductivity, aqueous solution, **6**: 241, 247, 254Freezing point lowering of aqueous solution, **4**: 258Melting point, **1**: 150Optical rotatory power, **7**: 353Reflectivity, selective, **5**: 260Refractive index, **1**: 150, 165Solubility in water, **4**: 235Vapor pressure lowering in aqueous solution, **3**: 297Viscosity, aqueous solution, **5**: 15X-ray diffraction data, **1**: 345

-Cerous nitrate*

-Potassium nitrate*

Sodium bromideAbsorption spectra, solutions, **5**: 329

Ammines

Decomposition pressure, **7**: 303Heat of decomposition, **7**: 303Heat of formation, **5**: 201Boiling point elevation in aqueous solution, **3**: 326Compressibility, **3**: 50Aqueous solution, **3**: 440Concentration cells, **6**: 328Decomposition pressure of hydrate, **7**: 303

Density

Aqueous solution, **3**: 80, 108; **7**: 73Liquid, **3**: 24; **4**: 443Solid, **3**: 43Diffusion in water, **5**: 67Electrical conductivity, **6**: 149, 154Aqueous solution, **6**: 235, 239Freezing point lowering of aqueous solution, **4**: 258Heat of dissociation, **5**: 418Heat of formation, **5**: 200Hydration temperature, **1**: 66Magnetic susceptibility, **6**: 360Refractive index, aqueous solution, **7**: 73Residual rays, **5**: 261Solubility in water, **4**: 235Specific heat, **5**: 100Aqueous solution, **5**: 123Surface tension, **4**: 443Aqueous solution, **4**: 465Thermal conductivity, aqueous solution, **5**: 229Transference number, **6**: 309, 310Vapor pressure, **3**: 214Aqueous solution, **3**: 371Vapor pressure lowering in aqueous solution, **3**: 297Viscosity, **7**: 212Aqueous solution, **5**: 15**Sodium bromide.**—(Continued)X-ray diffraction data, **1**: 345X-rays, absorption coefficient, **6**: 13

-Aluminum bromide*

-Arsenous oxide*

-Barium bromide*

-Bromine*

-Cadmium bromide*

-Cadmium bromide*-Potassium bromide

-Calcium bromide*

-Ethyl alcohol*

-Ethyl alcohol*-Methyl alcohol

-Ethyl alcohol*-Propyl alcohol

-Ethyl alcohol*-Sodium carbonate

-Formamide*

-Hydrogen bromide*

-Iodine*

-Lead bromide*

-Lead chloride*

-Lithium bromide*

-Magnesium bromide*

-Mercuric bromide*

-Methyl alcohol*

-Methyl alcohol*-Propyl alcohol

-Potassium bromide*

-Potassium oxalate*

-Propyl alcohol*

-Silver bromide*

-Sodium carbonate

Freezing point-solubility in water, **4**: 317

-Sodium chlorate

Freezing point-solubility, **4**: 68

-Sodium chloride

Freezing point-solubility, **4**: 68

-Sodium hydroxide

Freezing point-solubility, **4**: 67

-Sodium iodide

Freezing point-solubility, **4**: 68

-Sodium nitrate

Freezing point-solubility, **4**: 68

-Strontium bromide

Freezing point-solubility, **4**: 65**Sodium m-bromobenzoate**Density, aqueous solution, **3**: 85Viscosity, aqueous solution, **5**: 16**Sodium p-bromobenzoate**Density, aqueous solution, **3**: 85Viscosity, aqueous solution, **5**: 16**Sodium α-bromobutyrate**, electrical conductivity, aqueous solution, **6**: 241, 250**Sodium bromoplatinate**Heat of formation, **5**: 203**Sodium α-bromopropionate**, electrical conductivity, aqueous solution, **6**: 250**Sodium butyrate**Density, aqueous solution, **3**: 83; **7**: 74Electrical conductivity, aqueous solution, **6**: 248Heat of solution in water, **5**: 149Refractive index, aqueous solution, **7**: 74Surface tension, aqueous solution, **4**: 466Viscosity, aqueous solution, **5**: 16

-Acetic acid*

-Butyric acid*

-Formic acid*

-Methyl alcohol*

-Silver butyrate*

Sodium d-camphorate

-Camphoric acid*

Sodium caprylate, electrical conductivity, aqueous solution, **6**: 249**Sodium carbide**, heat of formation, **5**: 202**Sodium carbonate**Boiling point elevation in aqueous solution, **3**: 326Compressibility, aqueous solution, **3**: 440Decomposition pressure, **7**: 305

Density

Aqueous solution, **3**: 82, 108Liquid, **3**: 24**Sodium carbonate.**—(Continued)Dielectric constant, **6**: 77Aqueous solution, **6**: 104Diffusion in water, **5**: 67Electrical conductivity, **6**: 149Aqueous solution, **6**: 248, 254Freezing mixtures, use in, **1**: 63Freezing point lowering of aqueous solution, **4**: 259Heat of formation, **5**: 202

Hydrate

Decomposition pressure, **7**: 305Heat of decomposition, **7**: 305Hydration temperature, **1**: 66Magnetic susceptibility, **6**: 360Photoelectric current, aqueous solution, **6**: 69Reflectivity, selective, **5**: 260

Solubility in

Aqueous acetone, **3**: 409Aqueous allyl alcohol, **3**: 406Aqueous ethyl alcohol, **3**: 404Aqueous propyl alcohol, **3**: 414Water, **4**: 237, 248Sound, velocity of, in aqueous solution, **6**: 464Specific heat, **5**: 100Aqueous solution, **5**: 124Surface tension, aqueous solution, **4**: 466Thermal conductivity, aqueous solution, **5**: 229Transition temperature, **4**: 7Vapor pressure, aqueous solution, **3**: 372Vapor pressure lowering in aqueous solution, **3**: 297Verdet constant, aqueous solution, **6**: 427Viscosity, aqueous solution, **5**: 15

-Ammonium carbonate*

-Ammonium chloride*

-Ammonium sulfate*

-Barium carbonate*

-Calcium carbonate*

-Calcium carbonate*-Potassium carbonate

-Calcium chloride*

-Cupric chloride*-Sodium bicarbonate

-Calcium sulfate*

-Ethyl alcohol*

-Ethyl alcohol*-Sodium bromide

-Ethyl alcohol*-Sodium chloride

-Ethyl alcohol*-Sodium iodide

-Lead bromide*

-Lead chloride*

-Lead sulfate*

-Magnesium carbonate*

-Magnesium chloride*

-Magnesium sulfate*

-Potassium carbonate*

-Potassium carbonate*-Sodium hydroxide

-Potassium chlorate*

-Potassium chloride*

-Potassium chromate*

-Potassium hydroxide*

-Potassium hydroxide*-Sodium hydroxide

-Potassium nitrate*

-Potassium sulfate*

-Sodium bicarbonate*

-Sodium bicarbonate*-Sodium chloride

-Sodium bromide*

-Sodium chlorate

Freezing point-solubility, **4**: 68Freezing point-solubility in water, **4**: 300, 301, 385

-Sodium chloride-Sodium hydroxide

Freezing point-solubility in water, **4**: 301, 386

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium carbonate.—(Continued)

- Sodium chromate
 - Freezing point-solubility, **4**: 69
- Sodium cyanide
 - Vapor pressure, **3**: 285
- Sodium fluoride
 - Freezing point-solubility, **4**: 67
- Sodium hydroxide
 - Density, aqueous solution, **3**: 99
 - Freezing point-solubility, **4**: 67
 - Freezing point-solubility in water, **4**: 373, 393
- Sodium iodide
 - Freezing point-solubility in water, **4**: 319
- Sodium nitrate
 - Freezing point-solubility, **4**: 69
 - Freezing point-solubility in water, **4**: 359
- Sodium sulfate
 - Density, aqueous solution, **3**: 99
 - Freezing point-solubility, **4**: 68
 - Freezing point-solubility in water, **4**: 334, 389
- Strontium sulfate
 - Freezing point-solubility in water, **4**: 333
- Sodium cetylsulfonate, electrical conductivity, aqueous solution, **5**: 458; **6**: 250
- Sodium chlorate
 - Boiling point elevation in aqueous solution, **3**: 326
 - Density, **1**: 150
 - Aqueous solution, **3**: 80, 105
 - Electrical conductivity, aqueous solution, **6**: 241, 247, 254
 - Freezing point lowering of aqueous solution, **4**: 258
 - Heat of formation, **5**: 200
 - Heat of fusion, **5**: 131
 - Melting point, **1**: 150
 - Optical rotatory power, **7**: 353
 - Piezoelectric constant, **6**: 210
 - Reflectivity, selective, **5**: 260
 - Refractive index, **1**: 150, 165; **7**: 13, 14
 - Aqueous solution, **7**: 73
 - Solubility in water, **4**: 235
 - Solution velocity in water, **5**: 56, 58
 - Specific heat, liquid, **5**: 106
 - Surface tension, aqueous solution, **4**: 465
 - Thermal conductivity, **5**: 217, 231, 233
 - Transition points, **4**: 316
 - Vapor pressure, aqueous solution, **3**: 369, 370
 - Vapor pressure lowering in aqueous solution, **3**: 297
 - Viscosity, aqueous solution, **5**: 15
 - X-ray diffraction data, **1**: 345
- Ammonium sulfate*
- Barium chlorate*
- Cesium chlorate*
- Diethyl tartrate*
- Potassium carbonate*
- Potassium chlorate*
- Potassium chloride*
- Potassium nitrate*
- Sodium bromide*
- Sodium carbonate*
- Sodium chloride
 - Density, aqueous solution, **3**: 99
 - Freezing point-solubility, **4**: 68
- Sodium chromate
 - Freezing point-solubility, **4**: 68
- Sodium fluoride
 - Freezing point-solubility, **4**: 67
- Sodium nitrate
 - Freezing point-solubility, **4**: 68
- Thallium monochloride
 - Solubility in water, **7**: 321

Sodium chloride

- Absorption spectra, solutions, **5**: 327, 329
- Ammine
 - Decomposition pressure, **7**: 303
 - Heat of decomposition, **7**: 303
 - Heat of formation, **5**: 201
- Boiling point, **3**: 214
- Boiling point elevation in aqueous solution, **3**: 326
- Compressibility, **3**: 50
- Aqueous solution, **3**: 440
- Concentration cells, **6**: 328
- Density
 - Aqueous solution, **2**: 327; **3**: 79, 105, 108; **7**: 73
 - Liquid, **3**: 24; **4**: 443
 - Solid, **1**: 150; **3**: 43
- Dielectric constant, **6**: 77, 99
- Aqueous solution, **6**: 104
- Diffusion in ethyl alcohol, **5**: 73
- Diffusion in water, **5**: 67
- Electrical conductivity, **6**: 149, 154
- Aqueous solution, **6**: 231, 233, 239
- X-rays, effect of, **6**: 6
- Emission, spectral, **5**: 257, 259
- Entropy, **5**: 91
- Free energy, **7**: 303
- Freezing mixtures, use in, **1**: 63
- Freezing point lowering of aqueous solution, **4**: 258
- Grating spaces of, **6**: 7
- Heat content, **5**: 91
- Heat of adiabatic expansion, aqueous solution, **5**: 147
- Heat of formation, **5**: 200
- Heat of fusion, **5**: 131
- Heat of vaporization, **3**: 214
- Light, transmission of, **5**: 264
- Magnetic rotatory power, aqueous solution, **6**: 431
- Magnetic susceptibility, **6**: 360, 364
- Melting point, **1**: 54, 150
- Phase-equilibrium diagram, aqueous solution, **2**: 327
- Photoelectric current, aqueous solution, **6**: 69
- Radiation, transmission of, **5**: 264
- Refractive index, **1**: 150, 165; **7**: 13, 14, 77
- Aqueous solution, **7**: 73
- Residual rays, **5**: 261
- Solubility in
 - Aqueous allyl alcohol, **3**: 406
 - Aqueous ethyl acetoacetate, **3**: 416
 - Aqueous isoamyl alcohol, **3**: 416
 - Aqueous methyl ethyl ketone, **3**: 416
 - Aqueous propyl alcohol, **3**: 414
 - Ethyl ether-Water, **3**: 415
 - Water, **4**: 235
 - Pressure, effect of, **4**: 265
- Solution velocity in water, **5**: 56, 59
- Sound, velocity of, in aqueous solution, **6**: 464
- Specific heat, **5**: 91, 100
- Aqueous solution, **2**: 328; **5**: 115
- Spectral filter, use as, **5**: 273
- Surface tension, **4**: 443
- Aqueous solution, **4**: 465
- Thermal conductivity, **5**: 217, 231, 233
- Aqueous solution, **5**: 229
- Thermal expansion, **3**: 43
- Thermodynamic potential, **5**: 91
- Transference number, **6**: 309-311
- Transmission of radiant energy, **5**: 270
- Vapor pressure
 - Aqueous solution, **3**: 369, 370
 - Liquid, **3**: 214
 - Solid, **3**: 208
- Vapor pressure lowering in aqueous solution, **3**: 297

Sodium chloride.—(Continued)

- Verdet constant, **6**: 426
- Aqueous solution, **6**: 427
- Viscosity, **7**: 212
- Aqueous solution, **2**: 328; **5**: 15
- X-radiation, scattered, distribution of, **6**: 19
- X-ray diffraction data, **1**: 345
- X-rays
 - Absorption coefficient, **6**: 13, 16
 - Extinction coefficient, **6**: 16
 - Reflection of, by, **6**: 50, 51
 - Reflectivity of, **6**: 16
 - Scattering of, **6**: 17
- Acetone*
- Acetone*-Cupric chloride
- Aluminum chloride*
- Aminobenzoic acid*
- Ammonium bicarbonate*
- Ammonium carbonate*
- Ammonium chloride*
- Ammonium chloride*-Ammonium nitrate
- Ammonium chloride*-Potassium chloride
- Ammonium chloride*-Sodium nitrate
- Ammonium nitrate*
- Ammonium nitrate*-Sodium nitrate
- Ammonium sulfate*
- Ammonium tetraborate*
- Amyl alcohol*
- Amyl alcohol*-Boric acid
- Amyl alcohol*-Ethyl alcohol
- Aniline*
- Arsenous oxide*
- Barium chloride*
- Barium chloride*-Cupric chloride
- Barium chloride*-Hydrogen chloride
- Barium chloride*-Potassium chloride
- Barium chloride*-Strontium chloride
- Barium hydroxide*
- Barium nitrate*
- Barium oxalate*
- Barium sulfate*
- Benzoic acid*
- Bismuth chloride*
- Butyl alcohol*
- Cadmium chloride*
- Cadmium chloride*-Potassium chloride
- Calcium carbonate*
- Calcium carbonate*-Calcium sulfate-Carbon dioxide-Sodium sulfate
- Calcium carbonate*-Carbon dioxide
- Calcium carbonate*-Carbonic acid
- Calcium carbonate*-Sodium sulfate
- Calcium chloride*
- Calcium chloride*-Magnesium chloride-Potassium chloride
- Calcium chloride*-Potassium chloride
- Calcium hydroxide*
- Calcium nitrate*-Magnesium nitrate
- Calcium sulfate*
- Calcium sulfate*-Magnesium chloride-Potassium chloride
- Calcium sulfate*-Sodium sulfate
- Casein*
- Cesium chloride*
- Cesium chloride*-Lithium chloride
- Cobaltous chloride*
- Cupric chloride*
- Cupric sulfate*
- Cuprous chloride*
- Diethyl tartrate*
- 3, 5-Dinitrobenzoic acid*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl alcohol*-Mercuric chloride
- Ethyl alcohol*-Sodium carbonate
- Ethyl alcohol*-Sodium sulfate
- Ethyl ether*
- Ferric chloride*
- Formamide*
- Glucose*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium chloride.—(Continued)

- Glycerol*
- Glycocol*
- Hydrogen chloride*
- Hydrogen chloride*-Potassium chloride
- Hydrogen peroxide*
- Isobutyl alcohol*
- Lead bromide*
- Lead chloride*
- Lead chloride*-Potassium chloride
- Lead iodide*
- Lead sulfate*
- Lithium carbonate*
- Lithium chloride*
- Lithium chloride*-Potassium chloride
- Lithium chloride*-Rubidium chloride
- Magnesium carbonate*
- Magnesium chloride
- Magnesium chloride*-Potassium chloride
- Magnesium nitrate*-Potassium nitrate-Strontium chloride
- Magnesium nitrate*
- Magnesium sulfate*
- Magnesium sulfate*-Potassium chloride
- Manganous chloride*
- Mercuric chloride*
- Methyl alcohol*
- Phenol*
- Phthalic acid*
- Potassium bromate*
- Potassium carbonate*
- Potassium chlorate*
- Potassium chloride*
- Potassium chloride*-Potassium nitrate
- Potassium chloride*-Potassium sulfate
- Potassium chloride*-Strontium chloride
- Potassium hydrogen tartrate*
- Potassium iodide*-Potassium nitrate
- Potassium nitrate*
- Potassium nitrate*-Sodium nitrate
- Potassium perchlorate*
- Potassium sulfate*
- Propyl alcohol*
- Rubidium chloride*
- Salicylic acid*
- Silver chloride*
- Sodium bicarbonate*
- Sodium bicarbonate*-Sodium carbonate
- Sodium bromide*
- Sodium carbonate*
- Sodium carbonate*-Sodium hydroxide
- Sodium chlorate*
- Sodium chromate
- Freezing point-solubility, **4**: 68
- Sodium cyanide
- Freezing point-solubility, **4**: 68
- Sodium fluoride
- Freezing point-solubility, **4**: 67
- Sodium fluoride-Sodium sulfate
- Freezing point-solubility, **4**: 76
- Sodium hydrogen phosphate
- Freezing point-solubility in water, **4**: 298, 385
- Sodium hydroxide
- Density, aqueous solution, **3**: 99
- Freezing point-solubility, **4**: 67
- Vapor pressure, aqueous solution, **3**: 380
- Sodium iodide
- Freezing point-solubility, **4**: 68
- Sodium β -naphthalenesulfonate
- Freezing point-solubility in water, **4**: 303
- Sodium nitrate
- Density, aqueous solution, **3**: 99
- Freezing point-solubility, **4**: 68
- Freezing point-solubility in water, **4**: 291
- Viscosity, aqueous solution, **5**: 19

Sodium chloride.—(Continued)

- Sodium nitrile
- Freezing point-solubility, **4**: 68
- Sodium oxalate
- Freezing point-solubility in water, **4**: 303
- Sodium pyrophosphate
- Freezing point-solubility, **4**: 68
- Sodium silicate
- Density, aqueous solution, **3**: 99
- Sodium sulfate
- Density, aqueous solution, **3**: 99
- Freezing point-solubility, **4**: 68
- Freezing point-solubility in water, **4**: 287
- Sodium tetraborate
- Freezing point-solubility in water, **4**: 309
- Sodium uranate
- Freezing point-solubility in water, **4**: 309
- Stannous chloride
- Freezing point-solubility, **4**: 49
- Strontium carbonate
- Freezing point-solubility, **4**: 65
- Strontium chloride
- Freezing point-solubility, **4**: 65
- Viscosity, aqueous solution, **5**: 19
- Strontium nitrate
- Freezing point-solubility in water, **4**: 290
- Strontium sulfate
- Solubility in water, **7**: 343
- Succinic acid
- Freezing point-solubility in water, **4**: 413
- Succinonitrile
- Miscibility in water, **3**: 414
- Sucrose
- Density, aqueous solution, **3**: 102
- Freezing point-solubility in water, **4**: 422
- Specific heat, aqueous solution, **5**: 129
- Vapor pressure, aqueous solution, **3**: 379
- Vapor pressure lowering in aqueous solution, **3**: 299
- Sulfuric acid
- Density, aqueous solution, **3**: 96
- Thallium monochloride
- Freezing point-solubility, **4**: 53
- Solubility in water, **7**: 321
- Urea
- Freezing point-solubility in water, **4**: 401
- Sodium chloroacetate**
- Density, aqueous solution, **3**: 85
- Electrical conductivity, aqueous solution, **6**: 249
- Viscosity, aqueous solution, **5**: 16
- Chloroacetic acid*
- Silver chloroacetate*
- Trichloroacetic acid
- Density aqueous solution, **3**: 103
- Sodium chloroaurate**
- Solubility in water, **4**: 238
- Sodium o-chlorobenzoate**, electrical conductivity, aqueous solution, **6**: 249
- Sodium m-chlorobenzoate**
- Density, aqueous solution, **3**: 85
- Viscosity, aqueous solution, **5**: 16
- Sodium 3, 4-chloronitrophenate**
- Solubility in water, **4**: 238
- Sodium chloronitro-m-toluenesulfonate**
- Solubility in water, **4**: 238
- Sodium chloroplatinate**
- Absorption spectra, solutions, **5**: 329
- Heat of formation, **5**: 202
- Sodium chloroplatinite**
- Heat of formation, **5**: 202

Sodium chlororhodateHeat of formation, **5**: 203**Sodium chromate**

- Density, aqueous solution, **3**: 86, 106
- Electrical conductivity, aqueous solution, **6**: 251, 254
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 203
- Heat of fusion, **5**: 131
- Hydration temperature, **1**: 66
- Refractive index, **7**: 26
- Aqueous solution, **7**: 75
- Dispersion, **7**: 101
- Solubility in water, **4**: 238
- Specific heat, aqueous solution, **5**: 124
- Surface tension, aqueous solution, **4**: 466
- Transition temperature, **4**: 264
- Vapor pressure lowering in aqueous solution, **3**: 298
- Viscosity, aqueous solution, **5**: 17
- Chromic acid*
- Ethyl alcohol*
- Formamide*
- Potassium carbonate*
- Potassium chromate*
- Sodium carbonate*
- Sodium chloride*
- Sodium sulfate
- Freezing point-solubility, **4**: 68
- Freezing point-solubility in water, **4**: 347, 390

Sodium cinnamate

- Density, aqueous solution, **3**: 84
- Viscosity, aqueous solution, **5**: 16
- Cinnamic acid*

Sodium citraconate

- Density, aqueous solution, **3**: 84
- Viscosity, aqueous solution, **5**: 16

Sodium citrate

- Density, aqueous solution, **3**: 85
- Saturated, **3**: 105
- Heat of solution in water, **5**: 150
- Osmotic pressure, **4**: 431
- Vapor pressure lowering in aqueous solution, **3**: 298
- Viscosity, aqueous solution, **5**: 16
- Citric acid*
- Ethyl alcohol*

Sodium cobaltinitrite, freezing point lowering of aqueous solution, **4**: 259**Sodium crotonate**, electrical conductivity, aqueous solution, **6**: 248**Sodium cyanate**

- Heat of formation, **5**: 202
- Specific heat, **5**: 100

Sodium cyanide

- Heat of formation, **5**: 202
- Vapor pressure, **3**: 214
- Cuprous cyanide*
- Potassium cyanide*
- Silver cyanide*
- Silver iodide*
- Sodium carbonate*
- Sodium chloride*

Sodium cyanoacetate, electrical conductivity, aqueous solution, **6**: 250**Sodium m-cyanobenzoate**

- Density, aqueous solution, **3**: 85
- Viscosity, aqueous solution, **5**: 16

Sodium α -cyanocinnamate, electrical conductivity, aqueous solution, **6**: 250**Sodium cyanurate**

- Specific heat, **5**: 100

Sodium decoate

- Density, aqueous solution, **7**: 74
- Refractive index, aqueous solution, **7**: 74

Sodium diacetate

- Crystallography, **1**: 322
- Refractive index, **1**: 151, 165

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium dibromophenolarsenate

Electrical conductivity, aqueous solution, **6**: 250

Sodium α , β -dibromopropionate

Electrical conductivity, aqueous solution, **6**: 250

Sodium dicalcium metasilicate

Decomposition temperature, **4**: 85

Sodium dichloracetate

Density, aqueous solution, **3**: 85

Electrical conductivity, aqueous solution, **6**: 249

-Dichloroacetic acid*

-Ethyl alcohol*

-Hydrogen chloride*

-Lactic acid*

-Nitric acid*

-Trichloroacetic acid

Density, aqueous solution, **3**: 103

Sodium dichlorophenolarsenate

Electrical conductivity, aqueous solution, **6**: 250

Sodium dichromate

Density, **1**: 152

Aqueous solution, **3**: 86, 106

Electrical conductivity, aqueous solution, **6**: 251

Freezing point lowering of aqueous solution, **4**: 259

Heat of formation, **5**: 203

Melting point, **1**: 152

Refractive index, **1**: 152, 172

Solubility in water, **4**: 238

Solution velocity in water, **5**: 56

Viscosity, aqueous solution, **5**: 17

-Ethyl alcohol*

-Sodium chloride*

Sodium dicyanamide, electrical conductivity, aqueous solution, **6**: 250

Sodium diethylmalonate

-Ethyl alcohol*

Sodium dihydrogen antimonate

Solubility in water, **4**: 237

Sodium dihydrogen arsenate

Density, **1**: 151

Aqueous solution, **3**: 82

Electrical conductivity, aqueous solution, **6**: 248

Refractive index, **1**: 151, 170; **7**: 26

Specific heat, aqueous solution, **5**: 124

Vapor pressure lowering in aqueous solution, **3**: 297

Viscosity, aqueous solution, **5**: 15

Sodium dihydrogen arsenite

Absorption spectra, solutions, **5**: 329

Sodium dihydrogen citrate

Density, aqueous solution, **3**: 83

Heat of solution in water, **5**: 150

Sodium dihydrogen hypophosphate

Density, **1**: 151

Refractive index, **1**: 151, 169

Sodium dihydrogen hypophosphite

Electrical conductivity, aqueous solution, **6**: 248

Magnetic susceptibility, **6**: 360

Sodium dihydrogen orthophosphate

Refractive index, **1**: 151, 168

Sodium dihydrogen phosphate

Density, **1**: 151

Aqueous solution, **3**: 81

Electrical conductivity, aqueous solution, **6**: 248

Optical rotatory power, **7**: 353

Refractive index, **1**: 151, 168; **7**: 26

Solubility in water, **4**: 237

Specific heat, aqueous solution, **5**: 124

Vapor pressure lowering in aqueous solution, **3**: 297

Viscosity, aqueous solution, **5**: 15

Sodium dihydrogen phosphite

Heat of formation, **5**: 201

Sodium dihydrogen pyrophosphate

Density, **1**: 151

Refractive index, **1**: 151, 168

Sodium 2, 4-dihydroxybenzoate

Electrical conductivity, aqueous solution, **6**: 249

Sodium dihydroxymaleate, electrical conductivity, aqueous solution, **6**: 249**Sodium dihydroxytartrate**

Solubility in water, **4**: 238

Sodium 2, 4-dinitrobenzoate, electrical conductivity, aqueous solution, **6**: 250

Sodium 3, 5-dinitrobenzoate

Electrical conductivity, aqueous solution, **6**: 250

-Formamide*

Sodium 2, 4-dinitrophenate

-Acetone*

-Ethyl alcohol*

-Methyl alcohol*

Sodium 3, 4-dinitrophenate

Solubility in water, **4**: 238

Sodium diphenylglycolate, electrical conductivity, aqueous solution, **6**: 249

Sodium disilicate

Melting point, **1**: 152; **4**: 85

Refractive index, **1**: 152, 169

Sodium disulfide, electrical conductivity, aqueous solution, **6**: 247

Sodium disulfocinnamate

-Ethyl alcohol*

Sodium dithionate

Density, aqueous solution, **3**: 81

Electrical conductivity, aqueous solution, **6**: 247

Heat of formation, **5**: 201

Solubility in water, **4**: 236

Vapor pressure lowering in aqueous solution, **3**: 297

-Barium dithionate*

-Strontium dithionate

Freezing point-solubility in water, **4**: 356

Sodium ethanedisulfonate

Crystallography, **1**: 322

Density, **1**: 151

Sodium ethyl acetoacetate

-Ethyl alcohol*

Sodium ethylate

-Ethyl alcohol*

Sodium ethylsulfate

Density, aqueous solution, **3**: 85

Refractive index, aqueous solution, **7**: 75

Sodium ferrioxalate, decomposition pressure of hydrates, **7**: 306

Sodium ferrocyanide

Absorption spectra, solutions, **5**: 329

Density, **1**: 152

Aqueous solution, **3**: 105

Electrical conductivity, aqueous solution, **6**: 251

Osmotic pressure, **4**: 431

Refractive index, **1**: 152, 170

Solubility in water, **4**: 238

-Calcium ferrocyanide*

-Potassium ferrocyanide*

Sodium flame, electrical properties, **6**: 156

Sodium fluoride

Density, **1**: 150

Aqueous solution, **3**: 79, 105

Liquid, **4**: 443

Dielectric constant, **6**: 77

Electrical conductivity, **6**: 149

Aqueous solution, **6**: 231, 232

Freezing point lowering of aqueous solution, **4**: 258

Heat of formation, **5**: 200

Heat of fusion, **5**: 131

Magnetic susceptibility, **6**: 360

Melting point, **1**: 150

Refractive index, **1**: 150, 165

Sodium fluoride.—(Continued)

Solubility in water, **4**: 235

Specific heat, **5**: 100

Surface tension, **4**: 443

Vapor pressure, **3**: 214

Aqueous solution, **3**: 369

X-radiation, scattered, distribution of, **6**: 20

X-ray diffraction data, **1**: 345

-Aluminum fluoride*

-Aluminum fluoride*-Calcium fluoride

-Aluminum sodium fluoride*

-Cadmium fluoride*

-Calcium fluoride*

-Ferric fluoride*

-Hydrogen fluoride*

-Hydrogen fluoride*-Lead fluoride

-Lead fluoride*

-Magnesium oxide*-Potassium fluoride

-Potassium fluoride*

-Sodium carbonate*

-Sodium chlorate*

-Sodium chloride*

-Sodium chloride*-Sodium sulfate

-Sodium hydroxide

Freezing point-solubility, **4**: 67

-Sodium iodide

Freezing point-solubility, **4**: 67

-Sodium sulfate

Freezing point-solubility, **4**: 67

-Zinc fluoride

Freezing point-solubility, **4**: 54

Sodium fluoride phosphate

Density, aqueous solution, **3**: 105

Sodium fluoroaluminate

Density, liquid, **3**: 24

Sodium fluosilicate

Boiling point elevation in aqueous solution, **3**: 326

Decomposition pressure, **7**: 306

Density, **1**: 152

Heat of formation, **5**: 202

Refractive index, **1**: 152, 166; **7**: 26

Sodium fluozirconate

Solubility in water, **4**: 238

Sodium formate

Density, aqueous solution, **3**: 83, 105, 108; **7**: 74

Diffusion in water, **5**: 67

Electrical conductivity, aqueous solution, **6**: 248, 254

Heat of formation, **5**: 202

Refractive index, aqueous solution, **7**: 74

Solubility in water, **4**: 237

Specific heat, **5**: 100

Aqueous solution, **5**: 124

Surface tension, aqueous solution, **4**: 466

Vapor pressure, aqueous solution, **3**: 372

Viscosity, aqueous solution, **5**: 15

-Acetic acid*

-Butyric acid*

-Formamide*

-Formic acid*

-Iodine*

-Isobutyric acid*

-Lactic acid*

-Mercuric chloride*

-Trichloroacetic acid

Density, aqueous solution, **3**: 102

Sodium fumarate

Density, aqueous solution, **3**: 84

Viscosity, aqueous solution, **5**: 16

Sodium gallate, electrical conductivity

aqueous solution, **6**: 249

Sodium glycerate

Density, aqueous solution, **3**: 83

Sodium glycerophosphate, electrical conductivity, aqueous solution, **6**: 250

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium glycolate

- Density, aqueous solution, **3**: 83
- Heat of solution in water, **5**: 148
- Viscosity, aqueous solution, **5**: 16
- Formic acid**

Sodium hippurate

- Electrical conductivity, aqueous solution, **6**: 250
- Hippuric acid**

Sodium hydrazoate

- Density, aqueous solution, **3**: 82

Sodium hydride

- Band spectra, **5**: 415
- Decomposition pressure, **7**: 303
- Heat of formation, **5**: 200
- Photoelectric sensitivity, wave length for maximum, **6**: 68

Sodium hydrocinnamate

- Density, aqueous solution, **3**: 84
- Viscosity, aqueous solution, **5**: 16

Sodium hydrogen arsenate

- Density, **1**: 151
- Aqueous solution, **3**: 82
- Dielectric constant, **6**: 99
- Electrical conductivity, aqueous solution, **6**: 248

Hydrate

- Decomposition pressure, **7**: 305
- Heat of decomposition, **7**: 305
- Refractive index, **1**: 151, 169; **7**: 26
- Solubility in water, **4**: 237
- Specific heat, aqueous solution, **5**: 124
- Surface tension, aqueous solution, **4**: 466
- Vapor pressure lowering in aqueous solution, **3**: 297

Sodium hydrogen arsenite

- Absorption spectra, solutions, **5**: 329

Sodium hydrogen benzenepentacarboxylate

- viscosity, aqueous solution, **5**: 16

Sodium hydrogen citrate

- Density, aqueous solution, **3**: 84
- Heat of solution in water, **5**: 150

Sodium hydrogen fluoride

- Heat of formation, **5**: 200
- Potassium hydrogen fluoride**

Sodium hydrogen glutamate

- Crystallography, **1**: 323
- Refractive index, **1**: 152, 169

Sodium hydrogen hypophosphate

- Density, **1**: 151
- Refractive index, **1**: 151, 168; **7**: 26

Sodium hydrogen malate

- Density, aqueous solution, **3**: 83
- Heat of solution in water, **5**: 149

Sodium hydrogen malonate

- Crystallography, **1**: 322
- Heat of solution in water, **5**: 148
- Refractive index, **1**: 151, 169

Sodium hydrogen oxalate

- Density, aqueous solution, **3**: 108
- Heat of formation, **5**: 202

Hydrate

- Decomposition pressure, **7**: 304
- Heat of decomposition, **7**: 304

Sodium hydrogen phosphate

- Boiling point elevation in aqueous solution, **3**: 326
- Density, aqueous solution, **3**: 81, 105
- Dielectric constant, aqueous solution, **6**: 104
- Electrical conductivity, aqueous solution, **6**: 248
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 201
- Heat of fusion, **5**: 131

Hydrates

- Decomposition pressure, **7**: 305
- Heat of decomposition, **7**: 305
- Magnetic susceptibility, **6**: 360

Sodium hydrogen phosphate.—(Continued)

- Osmotic pressure, **4**: 431
- Refractive index, **1**: 151, 168; **7**: 26
- Solubility in water, **4**: 237
- Specific heat, **5**: 100
- Aqueous solution, **5**: 124
- Surface tension, aqueous solution, **4**: 466
- Thermal conductivity, **5**: 217
- Liquid hydrate, **5**: 228
- Transition temperature, **4**: 7
- Vapor pressure lowering in aqueous solution, **3**: 297

-Sodium chloride***Sodium hydrogen phosphite**

- Heat of formation, **5**: 201
- Magnetic susceptibility, **6**: 360

Sodium hydrogen pyrophosphate

- Electrical conductivity, aqueous solution, **6**: 248
- Heat of formation, **5**: 201, 202

Sodium hydrogen selenide

- Electrical conductivity, aqueous solution, **6**: 247

Sodium hydrogen selenite

- Density, aqueous solution, **3**: 81
- Freezing point lowering of aqueous solution, **4**: 259

Sodium hydrogen succinate

- Density, aqueous solution, **3**: 108
- Heat of solution in water, **5**: 149
- Electrical conductivity, aqueous solution, **6**: 248

Sodium hydrogen sulfate

- Density, aqueous solution, **3**: 81, 108
- Dielectric constant, aqueous solution, **6**: 104
- Diffusion in water, **5**: 67
- Electrical conductivity, aqueous solution, **6**: 247
- Freezing point lowering of aqueous solution, **4**: 258
- Heat of formation, **5**: 201
- Specific heat, aqueous solution, **5**: 124
- Surface tension, aqueous solution, **4**: 465
- Vapor pressure lowering in aqueous solution, **3**: 297
- Viscosity, aqueous solution, **5**: 15
- Nitric acid**
- Thallous sulfate*
- Solubility in water, **7**: 322

Sodium hydrogen tartrate

- Density, aqueous solution, **3**: 83; **7**: 74
- Electrical conductivity, aqueous solution, **6**: 248
- Heat of formation, **5**: 202
- Heat of solution in water, **5**: 149
- Refractive index, **1**: 151, 170
- Aqueous solution, **7**: 74
- Viscosity, aqueous solution, **5**: 16

Sodium hydrosulfide

- Absorption spectra, solutions, **5**: 329
- Electrical conductivity, aqueous solution, **6**: 247, 254

Sodium hydroxide

- Absorption spectra, solutions, **5**: 327
- Boiling point elevation in aqueous solution, **3**: 326
- Compressibility, aqueous solution, **3**: 440
- Concentration cells, **6**: 328
- Decomposition pressure of hydrate, **7**: 303
- Density
 - Aqueous solution, **3**: 79
 - Liquid, **3**: 24
- Dielectric constant, aqueous solution, **6**: 104
- Diffusion in ethyl alcohol, **5**: 73
- Diffusion in water, **5**: 66
- Drying agent, value as, **3**: 385

Sodium hydroxide.—(Continued)

- Electrical conductivity, **6**: 149
- Aqueous solution, **6**: 247, 254
- Freezing point lowering of aqueous solution, **4**: 258
- Heat of dilution with water, **5**: 161
- Heat of formation, **5**: 200
- Heat of fusion, **5**: 131
- Heat of neutralization, **5**: 212
- Heat of transition, **5**: 200
- Magnetic susceptibility, **6**: 360
- Refractive index, aqueous solution, **7**: 73
- Solubility in ammonia, **4**: 44
- Solubility in water, **4**: 235, 247
- Specific heat, aqueous solution, **5**: 115
- Surface tension, aqueous solution, **4**: 465
- Transference number, **6**: 309, 310
- Transition temperature, **4**: 7
- Vapor pressure, **3**: 214
- Aqueous solution, **3**: 269, 370
- Vapor pressure lowering in aqueous solution, **3**: 296
- Viscosity, **7**: 212
- Aqueous solution, **5**: 145
- X-rays, absorption coefficient, **6**: 13
- Acetic acid**
- Aluminum hydroxide**
- Aluminum oxide**
- Ammonium chloride**
- Ammonium hydroxide**
- Arsenous acid**
- Barium hydroxide**
- Bismuth hydroxide**
- Boric acid**
- Calcium hydroxide**
- Calcium sulfate**
- Chromic acid**
- Citric acid**
- Citric acid**-*Phosphoric acid*
- Iodic acid**
- Isobutyl alcohol**
- Lead hydroxide**
- Nicotine**
- Orthochromous acid**
- Periodic acid**
- Phenol**
- Phenolphthalein**
- Phosphoric acid**
- Potassium carbonate**-*Sodium carbonate*
- Potassium hydroxide**
- Potassium hydroxide**-*Sodium carbonate*
- Rubidium hydroxide**
- Sodium bromide**
- Sodium carbonate**
- Sodium carbonate**-*Sodium chloride*
- Sodium chloride**
- Sodium fluoride**
- Sodium iodide*
- Freezing point-solubility, **4**: 67
- Sodium nitrate*
- Density, aqueous solution, **3**: 99
- Sodium palmitate*
- Density, aqueous solution, **3**: 99
- Sodium silicate*
- Density, aqueous solution, **3**: 99
- Sodium sulfite*
- Freezing point-solubility in water, **4**: 322
- Sucrose*
- Surface tension, aqueous solution, **4**: 470
- Sulfuric acid*
- Freezing point-solubility in water, **4**: 354, 391
- Urea*
- Viscosity, aqueous solution, **5**: 24
- Zinc hydroxide*
- Solubility in water, **7**: 252
- Zinc oxide*
- Freezing point-solubility in water, **4**: 377, 393

Sodium *o*-hydroxybenzoate

Density, aqueous solution, **3**: 84
Heat of solution in water, **5**: 150
Solubility in water, **4**: 238

Sodium *m*-hydroxybenzoate

Density, aqueous solution, **3**: 84; **7**: 74
Electrical conductivity, aqueous solution, **6**: 249

Refractive index, aqueous solution, **7**: 74
Solubility in water, **4**: 238
Viscosity, aqueous solution, **5**: 16

Sodium *p*-hydroxybenzoate

Density, aqueous solution, **3**: 84
Electrical conductivity, aqueous solution, **6**: 249

Solubility in water, **4**: 238
Viscosity, aqueous solution, **5**: 16

Sodium hydroxyethylsulfonate

Density, aqueous solution, **3**: 85

Sodium hydroxyisobutyrate, electrical conductivity, aqueous solution, **6**: 248**Sodium hydroxymethylbenzoate (*o*-, *m*-)**
Electrical conductivity, aqueous solution, **6**: 249**Sodium hypobromite**

Absorption spectra, solutions, **5**: 329
Heat of formation, **5**: 200

Sodium hypochlorite

Absorption spectra, solutions, **5**: 329
Heat of formation, **5**: 200
Photochemical decomposition, **7**: 162, 164

Sodium hypophosphate

Density, **1**: 151
Refractive index, **1**: 151, 168

Sodium hypophosphite

Density, aqueous solution, **3**: 105

Sodium hyposulfite

Electrical conductivity, aqueous solution, **6**: 247
Freezing point lowering of aqueous solution, **4**: 258
Solubility in water, **4**: 236

Sodium iodate

Absorption spectra, **5**: 329
Density, aqueous solution, **3**: 81
Electrical conductivity, aqueous solution, **6**: 241, 247
Freezing point lowering of aqueous solution, **4**: 258
Refractive index, solutions, **5**: 329
Solubility in water, **4**: 236
Viscosity, aqueous solution, **5**: 15
-*Iodic acid**
-*Lanthanum iodate**
-*Lanthanum nitrate**

Sodium iodide

Absorption spectra, solutions, **5**: 329
Ammines
Decomposition pressure, **7**: 304
Heat of decomposition, **7**: 304
Heat of formation, **5**: 201
Boiling point elevation in aqueous solution, **3**: 326
Compressibility, **3**: 50
Aqueous solution, **3**: 440
Concentration cells, **6**: 328
Decomposition pressure of hydrate, **7**: 304
Density, **3**: 44
Aqueous solution, **3**: 80, 108; **7**: 73
Liquid, **3**: 24; **4**: 443
Diffusion in ethyl alcohol, **5**: 73
Diffusion in methyl alcohol, **5**: 72
Diffusion in water, **5**: 67
Electrical conductivity, **6**: 149
Aqueous solution, **6**: 235, 239
Freezing point lowering of aqueous solution, **4**: 258
Heat of dissociation, **5**: 418
Heat of formation, **5**: 200

Sodium iodide—(Continued)

Magnetic susceptibility, **6**: 360
Refractive index, aqueous solution, **7**: 73
Solubility in organic solvents, **4**: 205–211
Solubility in water, **4**: 235
Specific heat, **5**: 100
Aqueous solution, **5**: 123
Sulfur dioxide complexes
Decomposition pressure, **7**: 304
Heat of decomposition, **7**: 304
Surface tension, **4**: 443
Aqueous solution, **4**: 465
Transference number, **6**: 310
Vapor pressure, **3**: 214
Aqueous solution, **3**: 371
Vapor pressure lowering in aqueous solution, **3**: 297
Viscosity, aqueous solution, **5**: 15
X-ray diffraction data, **1**: 345
X-rays, absorption coefficient, **6**: 13
-*Acetone**
-*Acetophenone**
-*Ammonia**
-*Cadmium iodide**
-*Calcium sulfate**
-*Diethyl tartrate**
-*Ethyl alcohol**
-*Ethyl alcohol**-*Methyl alcohol*
-*Ethyl alcohol**-*Propyl alcohol*
-*Ethyl alcohol**-*Sodium carbonate*
-*Formamide**
-*Hydriodic acid**
-*Iodine**
-*Iodine**-*Nitrobenzene*
-*Iodine**-*m*-*Nitrotoluene*
-*Isoamyl alcohol**
-*Lead chloride**
-*Mercuric iodide**
-*Methyl alcohol**
-*Methyl alcohol**-*Propyl alcohol*
-*Potassium iodide**
-*Propyl alcohol**
-*Rubidium iodide**
-*Silver iodide**
-*Sodium bromide**
-*Sodium carbonate**
-*Sodium chloride**
-*Sodium fluoride**
-*Sodium hydroxide**
-*Sucrose*
Surface tension, aqueous solution, **4**: 470
-*Sulfur dioxide*
Boiling point elevation, **3**: 328
-*Zinc chloride*
Density, aqueous solution, **3**: 98

Sodium β -iodopropionate

Electrical conductivity, aqueous solution, **6**: 250
- β -*Iodopropionic acid**

Sodium isoamylate

-*Isoamyl alcohol**

Sodium isobutyrate

Density, aqueous solution, **3**: 83; **7**: 74
Refractive index, aqueous solution, **7**: 74
Viscosity, aqueous solution, **5**: 16
-*Acetic acid**
-*Formic acid**
-*Isobutyric acid**

Sodium isocaproate

Density, aqueous solution, **3**: 83
Viscosity, aqueous solution, **5**: 16

Sodium isophthalate

Density, aqueous solution, **7**: 75
Electrical conductivity, aqueous solution, **6**: 249
Refractive index, aqueous solution, **7**: 75
Viscosity, aqueous solution, **5**: 16

Sodium isosuccinate

Density, aqueous solution, **3**: 84
Heat of solution in water, **5**: 149
Viscosity, aqueous solution, **5**: 16

Sodium isovalerate

Density, aqueous solution, **3**: 83; **7**: 74
Electrical conductivity, aqueous solution, **6**: 249
Refractive index, aqueous solution, **7**: 74
Viscosity, aqueous solution, **5**: 16

Sodium itaconate

Density, aqueous solution, **3**: 84
Viscosity, aqueous solution, **5**: 16

Sodium lactate

Density, aqueous solution, **3**: 83
Viscosity, aqueous solution, **5**: 16

-*Dichloroacetic acid**

-*Formic acid**

-*Lactic acid**

Sodium laurate

-*Ethyl alcohol**

Sodium levulate

Electrical conductivity, aqueous solution, **6**: 249
Heat of solution in water, **5**: 149

Sodium linoleate

Electrical conductivity, **6**: 149

Sodium malate

Density, aqueous solution, **3**: 84
Heat of solution in water, **5**: 149
Viscosity, aqueous solution, **5**: 16
-*Formic acid**
-*Malic acid**

Sodium maleate

Density, aqueous solution, **3**: 84
Viscosity, aqueous solution, **5**: 16

Sodium malonate

Density, aqueous solution, **3**: 84
Electrical conductivity, aqueous solution, **6**: 249
Heat of solution in water, **5**: 148
Viscosity, aqueous solution, **5**: 16

Sodium mandelate, electrical conductivity, aqueous solution, **6**: 249**Sodium manganate**

Density, aqueous solution, **3**: 86
Electrical conductivity, aqueous solution, **6**: 251
Heat of formation, **5**: 203
-*Potassium sulfate**

Sodium mellitate, electrical conductivity, aqueous solution, **6**: 248**Sodium mesaconate**

Density, aqueous solution, **3**: 84
Viscosity, aqueous solution, **5**: 16

Sodium metantimoniate

Density, aqueous solution, **4**: 400
-*Methyl alcohol**

Sodium metaborate

Density, aqueous solution, **3**: 86
Electrical conductivity, aqueous solution, **6**: 251
Freezing point lowering of aqueous solution, **4**: 259
Surface tension, **4**: 444
-*Lithium metaborate**
-*Potassium metaborate**
-*Sodium metaphosphate*
Freezing point-solubility, **4**: 69
-*Sodium pyrophosphate*
Freezing point-solubility, **4**: 69
-*Sodium silicate*
Freezing point-solubility, **4**: 85

Sodium metaphosphate

Density
Aqueous solution, **3**: 81
Liquid, **3**: 24; **4**: 444
Electrical conductivity, **6**: 149
Heat of formation, **5**: 201
Reflectivity, selective, **5**: 260
Specific heat, **5**: 100
Aqueous solution, **5**: 124
Surface tension, **4**: 444
Vapor pressure lowering in aqueous solution, **3**: 297

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium metaphosphate.—(Continued)Viscosity, **7**: 212

-Sodium metaborate*

-Sodium pyrophosphate

Freezing point-solubility, **4**: 69**Sodium metasilicate**Absorption spectra, solutions, **5**: 327Melting point, **1**: 152; **4**: 85Refractive index, **1**: 152, 173

-Sodium tungstate

Viscosity, aqueous solution, **5**: 19**Sodium methanedisulfonate**Density, aqueous solution, **3**: 85**Sodium methoxybenzoate** (*o*-, *m*-)Electrical conductivity, aqueous solution, **6**: 249**Sodium methylate**

-Methyl alcohol*

Sodium molybdate

Density

Aqueous solution, **3**: 86, 106Liquid, **3**: 24; **4**: 444Electrical conductivity, **6**: 149Aqueous solution, **6**: 251Heat of formation, **5**: 203Heat of transition, **5**: 203Solubility in water, **4**: 239Surface tension, **4**: 444Transition temperature, **4**: 7Vapor pressure lowering in aqueous solution, **3**: 298X-rays, absorption coefficient, **6**: 13

-Molybdenic oxide*

-Potassium molybdate*

-Sodium sulfate

Freezing point-solubility, **4**: 68, 79

-Sodium tungstate

Freezing point-solubility, **4**: 69, 80**Sodium monoperchromate**, solubility in water, **4**: 239**Sodium myristate**

-Ethyl alcohol*

Sodium naphthalene-1, 5-disulfonateCrystallography, **1**: 322Density, **1**: 151Refractive index, **1**: 151, 171**Sodium β -naphthalenesulfonate**Electrical conductivity, aqueous solution, **6**: 250

-Sodium chloride*

-Sodium sulfate

Freezing point-solubility in water, **4**: 337**Sodium naphthionate**, refractive index, **7**: 26**Sodium 1, 4-naphthylaminesulfonate**Refractive index, **1**: 152, 171**Sodium nitrate**Absorption spectra, solutions, **5**: 327, 329, 330Boiling point elevation in aqueous solution, **3**: 326Compressibility, **3**: 50Aqueous solution, **3**: 440

Density

Aqueous solution, **3**: 82, 105, 108Liquid, **3**: 24; **4**: 443Solid, **1**: 150; **3**: 44Dielectric constant, **6**: 77, 99Diffusion in water, **5**: 67Electrical conductivity, **6**: 149, 154Aqueous solution, **6**: 231, 238, 240Emission, spectral, **5**: 259Freezing mixtures, use in, **1**: 63Freezing point lowering of aqueous solution, **4**: 259Heat of dilution with water, **5**: 162Heat of formation, **5**: 201Heat of fusion, **5**: 131Magnetic susceptibility, **6**: 360Melting point, **1**: 150**Sodium nitrate.**—(Continued)Osmotic pressure, **4**: 431Photoelectric current, aqueous solution, **6**: 69Reflectivity, selective, **5**: 260Refractive index, **1**: 150, 166; **7**: 26Aqueous solution, **7**: 74

Solubility in

Aqueous ethyl acetoacetate, **3**: 416Water, **4**: 237Solution velocity in water, **5**: 59Sound, velocity of, in aqueous solution, **6**: 464

Specific heat

Aqueous solution, **5**: 124Liquid, **5**: 106Solid, **5**: 100Surface tension, **4**: 443Aqueous solution, **4**: 465Thermal conductivity, aqueous solution, **5**: 229Transference number, **6**: 309, 310Vapor pressure, aqueous solution, **3**: 372Vapor pressure lowering in aqueous solution, **3**: 297Viscosity, **7**: 212Aqueous solution, **5**: 15X-ray diffraction data **1**: 345

-Acetone*

-Ammonia*

-Ammonia*-Ammonium nitrate

-Ammonium bicarbonate*-Sodium bicarbonate

-Ammonium chloride*-Ammonium nitrate

-Ammonium chloride*-Sodium chloride

-Ammonium chloride*-Sodium nitrate

-Ammonium nitrate*

-Ammonium nitrate*-Ammonium sulfate

-Ammonium nitrate*-Sodium bicarbonate

-Ammonium nitrate*-Sodium chloride

-Ammonium nitrate*-Sodium sulfate

-Ammonium sulfate*-Potassium chloride

-Barium chloride*

-Barium nitrate*

-Barium nitrate*-Potassium nitrate

-Calcium chloride*

-Calcium chloride*-Magnesium chloride-

Strontium chloride

-Calcium nitrate*

-Calcium nitrate*-Potassium nitrate

-Calcium sulfate*

-Calcium thiosulfate*

-Cupric nitrate*

-Cupric sulfate*

-Diethyl tartrate*

-Ethyl alcohol*

-Formamide*

-Glycerol*

-Glycocol*

-Hydrogen peroxide*

-Lanthanum iodate*

-Lead acetate*

-Lead azide*

-Lead nitrate*

-Lead nitrate*-Potassium nitrate

-Lithium nitrate*

-Lithium nitrate*-Potassium nitrate

-Magnesium chloride*

-Magnesium nitrate*

-Methylamine*

-Nitric acid*

-Nitric acid*-Sodium sulfate

-Phthalic acid*

-Potassium bromate*

-Potassium carbonate*

-Potassium chloride*

-Potassium nitrate*

-Potassium nitrate*-Sodium chloride

-Potassium nitrate*-Strontium nitrate

-Potassium perchlorate*

Sodium nitrate.—(Continued)

-Potassium sulfate*

-Silver nitrate*

-Sodium bicarbonate*

-Sodium bromide*

-Sodium carbonate*

-Sodium chlorate*

-Sodium chloride*

-Sodium hydroxide*

-Sodium nitrite

Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 69Freezing point-solubility in water, **4**: 357

-Sodium oxalate

Freezing point-solubility in water, **4**: 360

-Sodium sulfate

Density, aqueous solution, **3**: 99Freezing point-solubility, **4**: 68Freezing point-solubility in water, **4**: 325, 387

-Sodium thiosulfate

Freezing point-solubility in water, **4**: 355

-Strontium chloride

Density, aqueous solution, **3**: 98Freezing point-solubility in water, **4**: 290

-Strontium nitrate

Density, aqueous solution, **3**: 99Viscosity, aqueous solution, **5**: 19

-Sulfuric acid

Density, aqueous solution, **3**: 96

-Thallium monochloride

Solubility in water, **7**: 321

-Thallous nitrate

Freezing point-solubility, **4**: 54**Sodium nitrite**Absorption spectra, solutions, **5**: 329Density, aqueous solution, **3**: 82, 105Dielectric constant, aqueous solution, **6**: 104Electrical conductivity, aqueous solution, **6**: 248Freezing point lowering of aqueous solution, **4**: 259Heat of formation, **5**: 201Photochemical oxidation with iodine, **7**: 164Quantum sensitivity, **7**: 169Solubility in water, **4**: 237Vapor pressure, aqueous solution, **3**: 372Vapor pressure lowering in aqueous solution, **3**: 297

-Potassium nitrite*

-Silver nitrite*

-Sodium chloride*

-Sodium nitrate*

Sodium *m*-nitrobenzenesulfonateElectrical conductivity, aqueous solution, **6**: 250**Sodium *o*-nitrobenzoate**Density, aqueous solution, **3**: 85Electrical conductivity, aqueous solution, **6**: 250Heat of solution in water, **5**: 150Viscosity, aqueous solution, **5**: 16**Sodium *m*-nitrobenzoate**Density, aqueous solution, **3**: 85Electrical conductivity, aqueous solution, **6**: 250Heat of solution in water, **5**: 150Viscosity, aqueous solution, **5**: 16**Sodium *p*-nitrobenzoate**Density, aqueous solution, **3**: 85Electrical conductivity, aqueous solution, **6**: 250Heat of solution in water, **5**: 150Viscosity, aqueous solution, **5**: 16-*p*-Nitrobenzoic acid*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium nitrobenzoates
 -Methyl alcohol*

Sodium 2-nitro-4-chlorophenate
 -Ethyl alcohol*

Sodium p-nitrophenate
 Solubility in water, 4: 238
 -Ethyl alcohol*

Sodium octoate
 Density, aqueous solution, 7: 74
 Refractive index, aqueous solution, 7: 74

Sodium oleate
 Dielectric constant, 6: 97
 Electrical conductivity, 6: 149
 Refractive index, aqueous solution, 7: 74
 Dispersion, 7: 101
 -Ethyl alcohol*
 -Cresol (o-, m-, p-)*
 -Phenol*

Sodium orthophosphate
 Density, aqueous solution, 3: 81

Sodium orthosilicate
 Viscosity, aqueous solution, 5: 17

Sodium oxalate
 Density, aqueous solution, 3: 83, 108; 7: 74
 Diffusion in water, 5: 67
 Electrical conductivity, aqueous solution, 6: 248
 Freezing point lowering of aqueous solution, 4: 259
 Heat of formation, 5: 202
 Refractive index, aqueous solution, 7: 74
 Solubility in water, 4: 237
 Surface tension, aqueous solution, 4: 466
 Viscosity, aqueous solution, 5: 15
 -Ammonium oxalate*
 -Potassium oxalate*
 -Sodium nitrate*
 -Sodium sulfate
 Freezing point-solubility in water, 4: 335
 -Uranyl oxalate
 Freezing point-solubility in water, 4: 372

Sodium oxalodinitrodiammine cobaltate
 Solubility in aqueous solutions, 7: 345

Sodium oxide
 Heat of formation, 5: 200
 -Acetic anhydride*
 -Aluminum oxide*-Silica
 -Barium chloride*
 -Barium oxide*
 -Barium oxide*-Hydrogen chloride
 -Beryllium oxide*
 -Boric oxide*
 -Calcium oxide*-Silica
 -Ethyl alcohol*
 -Hydrogen chloride*
 -Phenolphthalein*
 -Silica*

Sodium palmitate
 Density, aqueous solution, 3: 84; 5: 447
 Electrical conductivity, 6: 149
 Aqueous solution, 5: 458; 6: 249
 Refractive index, aqueous solution, 7: 74
 Dispersion, 7: 101
 Viscosity, aqueous solution, 5: 447
 -Ethyl alcohol*
 -Palmitic acid*
 -Sodium hydroxide*

Sodium perchlorate
 Density, aqueous solution, 3: 80
 Saturated 3: 105
 Dielectric constant, 6: 77
 Aqueous solution, 6: 104
 Electrical conductivity, aqueous solution, 6: 247, 254
 Heat of formation, 5: 200
 Solubility in water, 4: 235
 Transition temperature, 4: 7
 Viscosity, aqueous solution, 5: 15

Sodium perchlorate.—(Continued)
 -Acetone*
 -Ammonium perchlorate*
 -Ethyl alcohol*
 -Methyl alcohol*
 -Potassium perchlorate*
 -Propyl alcohol*
 -Silver chlorate*
 -Sodium sulfate
 Freezing point-solubility in water, 4: 316

Sodium periodate
 Boiling point elevation in aqueous solution, 3: 326
 Optical rotatory power, 7: 353
 Pyroelectric effect, 6: 210
 -Cresol (o-, m-, p-)*

Sodium peroxide
 Electrical conductivity, 6: 154
 Heat of formation, 5: 200

Sodium o-phenolsulfonate, electrical conductivity, aqueous solution, 6: 250

Sodium p-phenolsulfonate
 Electrical conductivity, aqueous solution, 6: 250
 -Ethyl alcohol*

Sodium phenoxycetate
 Density, aqueous solution, 3: 84
 Viscosity, aqueous solution, 5: 16

Sodium phenylacetate
 Density, aqueous solution, 3: 84
 Electrical conductivity, aqueous solution, 6: 249
 Viscosity, aqueous solution, 5: 16

Sodium phenylacrylate, electrical conductivity, aqueous solution, 6: 249

Sodium phenylchloroacetate, electrical conductivity, aqueous solution, 6: 249

Sodium p-phenylenediarsonate, electrical conductivity, aqueous solution, 6: 250

Sodium phenylglycolate
 Density, aqueous solution, 3: 84
 Viscosity, aqueous solution, 5: 16

Sodium β-phenylpropionate
 -β-Phenylpropionic acid*

Sodium phosphate
 Density, 1: 151
 Aqueous solution, 3: 81, 105
 Electrical conductivity, aqueous solution, 6: 248
 Freezing point lowering of aqueous solution, 4: 259
 Heat of formation, 5: 201
 Hydration temperature, 1: 66
 Melting point, 1: 151
 Reflectivity, selective, 5: 260
 Refractive index, 1: 151, 166
 Solubility in water, 4: 237
 Surface tension, aqueous solution, 4: 466
 Vapor pressure lowering in aqueous solution, 3: 297
 -Phosphoric acid*

Sodium phosphotungstate
 Density, aqueous solution, 3: 86, 106

Sodium phthalate
 Density, aqueous solution, 3: 85; 7: 75
 Electrical conductivity, aqueous solution, 6: 249
 Heat of solution in water, 5: 150
 Refractive index, aqueous solution, 7: 75
 Viscosity, aqueous solution, 5: 16
 -Sodium sulfate
 Freezing point-solubility in water, 4: 337

Sodium phthalate (m-, p-)
 Density, aqueous solution, 3: 85

Sodium picrate
 Electrical conductivity, aqueous solution, 6: 250
 Heat of solution in water, 5: 149

Sodium picrate.—(Continued)
 Solubility in water, 4: 382
 -Ethyl alcohol*

Sodium platinocyanide
 Electrical conductivity, aqueous solution, 6: 251
 Refractive index, 7: 26

Sodium propionate
 Boiling point elevation in aqueous solution, 3: 326
 Density, aqueous solution, 3: 83, 108; 7: 74
 Electrical conductivity, aqueous solution, 6: 248
 Heat of solution in water, 5: 148
 Refractive index, aqueous solution, 7: 74
 Viscosity, aqueous solution, 5: 16
 -Formic acid*
 -Methyl alcohol*
 -Propionic acid*
 -Silver propionate*

Sodium pyroarsenate
 -Potassium pyroarsenate*

Sodium pyroborate
 Solubility in water, 4: 239

Sodium pyromellitate, electrical conductivity, aqueous solution, 6: 249

Sodium pyrophosphate
 Density, 1: 151
 Aqueous solution, 3: 81
 Electrical conductivity, aqueous solution, 6: 248
 Heat of formation, 5: 201
 Reflectivity, selective, 5: 260
 Refractive index, 1: 151, 168; 7: 26
 Solubility in water, 4: 237
 Specific heat, 5: 100
 Aqueous solution, 5: 124
 Transition temperature, 4: 7
 Vapor pressure lowering in aqueous solution, 3: 297
 -Disodium dihydrogen disulfate*
 -Potassium pyrophosphate*
 -Sodium chloride*
 -Sodium metaborate*
 -Sodium metaphosphate*
 -Sulfuric acid
 Boiling point elevation, 3: 328

Sodium pyrosulfite
 Electrical conductivity, aqueous solution, 6: 247
 Freezing point lowering of aqueous solution, 4: 258
 Solubility in water, 4: 236

Sodium pyrotartrate
 Density, aqueous solution, 3: 84
 Viscosity, aqueous solution, 5: 16

Sodium salicylate
 Boiling point elevation in aqueous solution, 3: 326
 Density, aqueous solution, 3: 105; 7: 74
 Electrical conductivity, aqueous solution, 6: 249
 Refractive index, aqueous solution, 7: 74
 Surface tension, aqueous solution, 4: 466
 Viscosity, aqueous solution, 5: 16
 -Ammonium formate*
 -Antipyrine salicylate*
 -Ethyl alcohol*
 -Formamide*
 -Salicylic acid*

Sodium selenate
 Density, aqueous solution, 3: 82, 105
 Electrical conductivity, aqueous solution, 6: 247
 Heat of formation, 5: 201
 Solubility in water, 4: 236
 -Selenic acid*

Sodium selenide, heat of formation, 5: 201

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium selenite

- Density, aqueous solution, **3**: 81
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 201
- Mercuric selenite**

Sodium silicate

- Boiling point elevation in aqueous solution, **3**: 326
- Density, aqueous solution, **3**: 85
- Dielectric constant, aqueous solution, **6**: 104
- Electrical conductivity, aqueous solution, **6**: 251, 254
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 202
- Refractive index, aqueous solution, **7**: 75, 95
- Transference number, **6**: 310
- Viscosity, aqueous solution, **5**: 16
- Calcium metasilicate**
- Sodium chloride**
- Sodium hydroxide**
- Sodium metaborate**
- Sodium tungstate*
- Density, aqueous solution, **3**: 99
- Freezing point-solubility, **4**: 85

Sodium stannate

- Density, aqueous solution, **3**: 86
- Magnetic susceptibility, **6**: 360
- Solubility in water, **4**: 238

Sodium stearate

- Density, aqueous solution, **3**: 84; **5**: 449
- Electrical conductivity, **6**: 149
- Aqueous solution, **5**: 458
- Refractive index, aqueous solution, **7**: 74
- Dispersion, **7**: 101

Sodium strontium arsenate

- Heat of formation, **5**: 203

Sodium strontium phosphate

- Heat of formation, **5**: 203

Sodium suberate

- Density, aqueous solution, **3**: 85
- Viscosity, aqueous solution, **5**: 16

Sodium succinate

- Density, aqueous solution, **3**: 84, 108; **7**: 74
- Electrical conductivity, aqueous solution, **6**: 249
- Heat of solution in water, **5**: 149
- Refractive index, aqueous solution, **7**: 74
- Vapor pressure lowering in aqueous solution, **3**: 298
- Viscosity, aqueous solution, **5**: 16
- Barium succinate**
- Calcium succinate**
- Formamide**
- Formic acid**
- Strontium succinate*
- Solubility in water, **7**: 343
- Succinic acid*
- Density, aqueous solution, **3**: 102
- Freezing point-solubility in water, **4**: 414

Sodium p-sulfaminobenzoate, electrical conductivity, aqueous solution, **6**: 250**Sodium sulfanilate**

- Crystallography, **1**: 323
- Refractive index, **1**: 152, 170; **7**: 26

Sodium sulfantimoniate

- Optical rotatory power, **7**: 353
- Solubility in water, **4**: 237

Sodium sulfate

- Activity coefficient in water, **7**: 304
- Boiling point elevation in aqueous solution, **3**: 326
- Compressibility, aqueous solution, **3**: 440
- Concentration cells, **6**: 328

Sodium sulfate.—(Continued)

- Cryoscopic constant, **4**: 215
- Density
 - Aqueous solution, **3**: 81, 105, 108; **7**: 74
 - Liquid, **3**: 24; **4**: 443
 - Solid, **1**: 150; **3**: 44
- Dielectric constant, aqueous solution, **6**: 104
- Diffusion in water, **5**: 67
- Electrical conductivity, **6**: 149
 - Aqueous solution, **6**: 231, 236, 240
- Freezing mixtures, use in, **1**: 63, 64
- Freezing point lowering of aqueous solution, **4**: 258
- Glass, effect of aqueous solution on, **2**: 111
- Heat of formation, **5**: 201
- Heat of fusion, **5**: 131
- Hydrates
 - Decomposition pressure, **7**: 304
 - Heat of decomposition, **7**: 304
 - Transition point, **1**: 54
- Hydration temperature, **1**: 66
- Magnetic susceptibility, **6**: 360
- Melting point, **1**: 54, 150
- Photoelectric current, aqueous solution, **6**: 69
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 150, 168
 - Aqueous solution, **7**: 74
- Solubility in aqueous ethyl alcohol, **3**: 404
- Solubility in water, **4**: 236, 248
- Sound, velocity of, in aqueous solution, **6**: 464
- Specific heat, **5**: 100
 - Aqueous solution, **5**: 124
- Surface tension, **4**: 443
 - Aqueous solution, **4**: 465
- Thermal conductivity, aqueous solution, **5**: 229
- Transference number, **6**: 310
- Transition temperature, **1**: 150; **4**: 7, 316
 - Pressure, effect of, **4**: 264
- Vapor pressure, aqueous solution, **3**: 371
- Vapor pressure lowering in aqueous solution, **3**: 297
- Verdet constant, aqueous solution, **6**: 427
- Viscosity, aqueous solution, **5**: 15
- Acetone**
- Aluminum sulfate**
- Ammonia**
- Ammonium bicarbonate**
- Ammonium chloride**
- Ammonium nitrate**-*Sodium nitrate*
- Ammonium perchlorate**
- Ammonium sulfate**
- Ammonium tetraborate**
- Barium sulfate**
- Cadmium sulfate**
- Calcium acetate**-*Potassium sulfate*
- Calcium carbonate**
- Calcium carbonate**-*Calcium sulfate*-*Carbon dioxide*-*Sodium chloride*
- Calcium carbonate**-*Sodium chloride*
- Calcium chloride**
- Calcium chloride**-*Magnesium chloride*-*Potassium chloride*
- Calcium chloride**-*Potassium sulfate*
- Calcium hydroxide**
- Calcium iodide**-*Potassium sulfate*
- Calcium nitrate**
- Calcium sulfate**
- Calcium sulfate**-*Potassium sulfate*
- Calcium sulfate**-*Sodium chloride*
- Cerous sulfate**
- Cesium sulfate**
- Cobaltous sulfate**
- Cupric chloride**

Sodium sulfate.—(Continued)

- Cupric nitrate**
- Cupric sulfate**
- Cupric sulfate**-*Sulfuric acid*
- Ethyl alcohol**
- Ethyl alcohol**-*Sodium chloride*
- Ethyl alcohol**-*Sulfuric acid*
- Ferrous sulfate**
- Formamide**
- Hydrogen chloride**
- Hydrogen chloride**-*Sulfuric acid*
- Hydrogen peroxide**
- Lanthanum sulfate**
- Lead acetate**
- Lead iodide**
- Lead sulfate**
- Lithium carbonate**
- Lithium sulfate**
- Magnesium carbonate**
- Magnesium chloride**
- Magnesium chloride**-*Potassium chloride*
- Magnesium sulfate**
- Magnesium sulfate**-*Potassium sulfate*
- Manganous sulfate**
- Nickel sulfate**
- Nicotine**
- Nitric acid**
- Nitric acid**-*Sodium nitrate*
- Nitric acid**-*Sulfuric acid*
- Phenol**
- Phosphoric acid**
- Phthalic acid**
- Potassium carbonate**
- Potassium chloride**
- Potassium manganate**
- Potassium nitrate**
- Potassium perchlorate**
- Potassium sulfate**
- Silver bromate**
- Silver sulfate**
- Sodium acetate**
- Sodium bicarbonate**
- Sodium carbonate**
- Sodium chloride**
- Sodium chloride**-*Sodium fluoride*
- Sodium chromate**
- Sodium fluoride**
- Sodium molybdate**
- Sodium β-naphthalenesulfonate**
- Sodium nitrate**
- Sodium oxalate**
- Sodium perchlorate**
- Sodium phthalate**
- Sodium sulfide*
- Freezing point-solubility in water, **4**: 321
- Sodium sulfite*
- Density, aqueous solution, **3**: 99
- Freezing point-solubility in water, **4**: 322, 387
- Sodium tetraborate*
- Freezing point-solubility in water, **4**: 346, 390
- Sodium thiosulfate*
- Freezing point-solubility in water, **4**: 323
- Sodium tungstate*
- Freezing point-solubility, **4**: 69, 79
- Strontium carbonate*
- Freezing point-solubility in water, **4**: 333
- Strontium sulfate*
- Freezing point-solubility, **4**: 65
- Sucrose*
- Surface tension, aqueous solution, **4**: 470
- Sulfuric acid*
- Boiling point elevation, **3**: 328
- Density, aqueous solution, **3**: 96
- Freezing point-solubility, **4**: 43

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sodium sulfate.—(Continued)

- Thallous sulfate*
Freezing point-solubility in water, **4**: 337; **7**: 322
- Thorium sulfate*
Freezing point-solubility in water, **4**: 336
- Yttrium sulfate*
Freezing point-solubility in water, **4**: 348
- Zinc sulfate*
Freezing point-solubility in water, **4**: 338
- Zirconyl sulfate*
Density, **3**: 134
- Sodium sulfide**
Absorption spectra, solutions, **5**: 329
Density, aqueous solution, **3**: 81
Electrical conductivity, aqueous solution, **6**: 247, 254
Freezing point lowering of aqueous solution, **4**: 258
Heat of formation, **5**: 200
Solubility in water, **4**: 236
Transition point, **4**: 321
X-ray diffraction data, **1**: 345
- Cuprous sulfide**
- Ferrous sulfide**
- Nickel subsulfide**
- Nickelic sulfide**
- Sodium sulfate**
- Sulfur*
Freezing point-solubility in water, **4**: 268
- Sodium sulfite**
Absorption spectra, **5**: 329, 330
Density, aqueous solution, **3**: 81
Diffusion in water, **5**: 67
Freezing point lowering of aqueous solution, **4**: 258
Heat of formation, **5**: 201
Magnetic susceptibility, **6**: 360
Solubility in water, **4**: 236
- Sodium hydroxide**
- Sodium sulfate**
- Sodium tartrate**
Boiling point elevation in aqueous solution, **3**: 326
Crystallography, **1**: 322
Decomposition pressure of hydrate, **7**: 305
Density, aqueous solution, **3**: 84; **7**: 74
Diffusion in water, **5**: 67
Electrical conductivity, aqueous solution, **6**: 249
Heat of formation, **5**: 202
Heat of solution in water, **5**: 149
Refractive index, aqueous solution, **7**: 74
Surface tension, aqueous solution, **4**: 466
Vapor pressure, aqueous solution, **3**: 372
Vapor pressure lowering in aqueous solution, **3**: 298
Viscosity, aqueous solution, **5**: 16
- Ammonium tartrate**
- Formic acid**
- Potassium tartrate**
- Sucrose*
Density, aqueous solution, **3**: 102
- Sucrose-Tartaric acid*
Density, aqueous solution, **3**: 103
- Tartaric acid*
Density, aqueous solution, **3**: 102
- Sodium tellurate**, heat of formation, **5**: 201
- Sodium terephthalate**
Electrical conductivity, aqueous solution, **6**: 249
Heat of solution in water, **5**: 150
Viscosity, aqueous solution, **5**: 16

Sodium tetraborate

- Absorption spectra, solutions, **5**: 327
- Boiling point elevation in aqueous solution, **3**: 326
- Decomposition pressures of hydrates, **7**: 306
- Density, **1**: 153
Aqueous solution, **3**: 86
- Dielectric constant, aqueous solution, **6**: 104
- Electrical conductivity, aqueous solution, **6**: 251
- Freezing point lowering of aqueous solution, **4**: 259
- Heat of formation, **5**: 203
- Melting point, **1**: 153
- Refractive index, **1**: 153, 165; **7**: 13
- Solubility in water, **4**: 239
- Specific heat, **5**: 100
- Vapor pressure lowering in aqueous solution, **3**: 298
- Ammonium chloride**
- Ammonium sulfate**
- Ammonium tetraborate**
- Calcium phosphate**
- Sodium chloride**
- Sodium sulfate**
- Sodium tetrachromate**
Density, aqueous solution, **3**: 106
Solubility in water, **4**: 239
- Sodium tetrasulfide**, heat of formation, **5**: 201
- Sodium tetrathionate**, heat of formation, **5**: 201
- Sodium tetratungstate**, vapor pressure lowering in aqueous solution, **3**: 298
- Sodium thallium chloride**, heat of formation, **5**: 202
- Sodium thiocyanate**
Density, aqueous solution, **3**: 85; **7**: 75
Electrical conductivity, aqueous solution, **6**: 250, 254
Heat of formation, **5**: 202
Refractive index, aqueous solution, **7**: 75
Vapor pressure lowering in aqueous solution, **3**: 298
- Methyl acetate**
- Potassium thiocyanate**
- Sodium thiosulfate**
Absorption spectra, solutions, **5**: 327
Boiling point elevation in aqueous solution, **3**: 326
Cryoscopic constant, **4**: 215
Crystallization velocity, **5**: 61
Decomposition pressure of hydrate, **7**: 305
Density, **1**: 150
Aqueous solution, **3**: 81
Diffusion in water, **5**: 67
Electrical conductivity, **6**: 149
Aqueous solution, **6**: 247
Freezing mixtures, use in, **1**: 63
Freezing point lowering of aqueous solution, **4**: 258
Heat of formation, **5**: 201
Heat of fusion, **5**: 131
Hydration temperature, **1**: 66
Magnetic susceptibility, **6**: 360
Osmotic pressure, **4**: 431
Refractive index, **1**: 150, 169; **7**: 26
Solubility in water, **4**: 236, 248
Specific heat
Liquid, **5**: 106
Solid, **5**: 100
Surface tension, aqueous solution, **4**: 465
Transition velocity, **5**: 61
Vapor pressure, aqueous solution, **3**: 372
Vapor pressure lowering in aqueous solution, **3**: 297
- Calcium nitrate**

Sodium thiosulfate.—(Continued)

- Calcium thiosulfate**
- Sodium nitrate**
- Sodium sulfate**
- Sodium o-toluate**
Density, aqueous solution, **3**: 84; **7**: 74
Refractive index, aqueous solution, **7**: 74
Viscosity, aqueous solution, **5**: 16
- Sodium m-toluate**
Density, aqueous solution, **3**: 84; **7**: 74
Refractive index, aqueous solution, **7**: 74
Viscosity, aqueous solution, **5**: 16
- Sodium p-toluate**
Density, aqueous solution, **3**: 84; **7**: 74
Refractive index, aqueous solution, **7**: 74
Viscosity, aqueous solution, **5**: 16
- p-Toluic acid*
Freezing point-solubility in water, **4**: 420
- Sodium toluates**, electrical conductivity, aqueous solution, **6**: 249
- Sodium o-toluidine**, electrical conductivity, aqueous solution, **6**: 250
- Sodium tricalcium trimetasilicate**
Melting point, **4**: 85
- Sodium trichloroacetate**
Density, aqueous solution, **3**: 85
Heat of solution in water, **5**: 148
Viscosity, aqueous solution, **5**: 16
- Chloroacetic acid**
- Trichloroacetic acid*
Density, aqueous solution, **3**: 103
- Sodium trichlorobutyrates**
Density, aqueous solution, **3**: 85
Electrical conductivity, aqueous solution, **6**: 249
- Sodium trichromate**
Density, aqueous solution, **3**: 106
Solubility in water, **4**: 238
- Sodium trihydrogen pyrophosphate**, heat of formation, **5**: 201
- Sodium tripotassium chromate**
Density, **1**: 158
Refractive index, **1**: 158, 167
- Sodium tripotassium sulfate**, dielectric constant, **6**: 99
- Sodium trithionate**, heat of formation, **5**: 201
- Sodium tungstate**
Density, aqueous solution, **3**: 86, 106
Liquid, **3**: 24; **4**: 444
Electrical conductivity, **6**: 149
Aqueous solution, **6**: 251
Heat of formation, **5**: 203
Heat of transition, **5**: 203
Solubility in water, **4**: 239
Surface tension, **4**: 444
Transition temperature, **4**: 7
Vapor pressure lowering in aqueous solution, **3**: 298
Viscosity, aqueous solution, **5**: 17
X-rays, absorption coefficient, **6**: 13
- Potassium tungstate**
- Sodium metasilicate**
- Sodium molybdate**
- Sodium silicate**
- Sodium sulfate**
- Tungstic oxide*
Freezing point-solubility, **4**: 61
- Sodium uranate**
Heat of formation, **5**: 203
- Sodium chloride**
- Sodium uranyl acetate**
Crystallography, **1**: 323
Density, **1**: 153
Optical rotatory power, **7**: 353
Photoluminescence, **5**: 387
Refractive index, **1**: 153, 165
- Sodium uranyl sulfate**, photoluminescence, **5**: 387

* Data for system will be found under this compound in Index. Full explanation on page vii.

- Sodium valerate**
-Methyl alcohol*
-Silver valerate*
- Sodium vanadate**
Density, aqueous solution, 3: 86
Heat of formation, 5: 203
Refractive index, 1: 153, 165, 166; 7: 26
- Sodium zinc sulfate**
Heat of formation, 5: 202
Solubility in water, 4: 238
- Sodium zincate**, heat of formation, 5: 202
- Soils**
Adsorption on, 3: 253
Dielectric constant, 6: 105
Heat of wetting, 5: 142
Radioactivity, 1: 379
Thermal conductivity, 2: 314
Thermal diffusivity, 2: 315
- Solar spectrum**, 5: 380
- Solar system**, orbital data, 1: 392
- Solders**, 2: 383, 465, 467, 470, 555, 557
Aluminum, 2: 371, 468, 536, 546, 551
British specifications, 2: 387
Gold, 2: 377, 586
Silver, 2: 383
- Solubility**
Conversion factors, 1: 23
Definition, 1: 41
Gases in colloidal solutions, 3: 281
Gases in liquids, 3: 254
Gases in metals and alloys, 3: 270
Gases in solids, 3: 249
Gases in solutions, 3: 271
Liquids in liquids, 3: 386
Non-electrolytes in water, 4: 250, 395
Organic compounds in water, 4: 250, 395
Pressure, effect of, 4: 265
Soaps in water, 5: 454
Solids in liquids, 4: 1
Slightly soluble salts, 6: 256; 7: 313
Strong electrolytes in water, 4: 216, 270
- Solution**, heat of, 5: 148, 169
- Solution**, velocity of, 5: 55
- Somaliland**, weights and measures, 1: 11
- Sommerfeld magneton**, 6: 346
- Sommerfeld relativity doublet theory**, 6: 25
- Somnirol**, optical rotatory power, 7: 465
- Sommitol**, optical rotatory power, 7: 465
- Sorbic acid**, heat of combustion, 5: 165
- Sorbieritol**, optical rotatory power, 7: 388
- Sorbinose**, heat of combustion, 5: 166
- Sorbitol**
Electrical conductivity, aqueous solution, 6: 277
Refractive index, aqueous solution, 7: 69
- Sorbitol derivatives**
Optical rotatory power, 7: 388
- Sorbose**, optical rotatory power, 7: 389
- Sorel's alloy**, 2: 383
- Sound**
Absorption of, 6: 459
Amplification by horns, 6: 458
Audibility of, 1: 94; 6: 450
Detection, 6: 457
Magnetization, production by, 6: 439
Measurement of, 6: 457
Psychological data, 1: 94; 6: 450
Reaction times to, 1: 95
Reverberation, 6: 460
Transmission, 6: 458
Velocity, 6: 461
In gases in tubes, 6: 466
In porcelain, 2: 72, 81
Temperature, effect of, 6: 463
Wave-filters, 6: 458
- Sound generators**, 6: 453
- Spain**, weights and measures, 1: 12
- Spandau alloy**, 2: 383; cf. 546
- Spangolite**
Density, 1: 137
Refractive index, 1: 137, 167
- Spark discharge**, light emission by, 5: 433
- Sparteine**, optical rotatory power, 7: 419
- Specific gravity**, definition, 1: 41
See also Density.
- Specific heat**
Building materials, 2: 55
Carbons, 2: 303
Definitions, 1: 41
Elements, 1: 102; 5: 80, 92
Fibers, vegetable, 2: 237
Gases, 5: 79, 84
Glass, 2: 93, 101
Liquids, 5: 84, 92, 106
Magnesia concrete, 2: 128
Oils, fats and waxes, 2: 210
Petroleum products, 2: 151
Phenol resins, 2: 299
Porcelain, laboratory, 2: 79
Refractory materials, 2: 85
Refrigerating brines, 2: 328
Solids, 5: 84, 92, 95
Solutions and mixtures, 5: 118, 122
Tars, 2: 172
Whiteware, 2: 79
- Specific heat constant**, 1: 18
- Specific inductive capacity**, definition, 1: 41
- Specific rotation**, definition, 2: 334
- Spectra**
Absorption, 5: 326, 359
Band, 5: 409
Celestial
Unidentified lines of, 5: 383
Electrically exploded wires, 5: 434
Emission, 5: 277
Nebular, classification, 1: 384
Solar, 1: 384; 5: 380
Spark discharge in liquids, 5: 433
Stellar, 5: 383
Classification, 1: 384
X-rays, 6: 23
- Spectral filters**, 5: 264, 271
- Spectral lines**
Magnetic resolution, 5: 418
Pole effect, 5: 432
- Spectral series**, 5: 392
Definitions, 1: 41
- Spectroscopy**
Crystal gratings for, 6: 7
Standards of wave-length, 5: 274
- Specularite**, electrical conductivity, 6: 154, 155
- Speculum** (alloy), 2: 383, 561
Emission, spectral, 5: 254
- Speculums**, list of, 2: 391
- Speech power**, 6: 452
- Spelter wire**, 2: 383; cf. 555
- Spencerite**
Density, 1: 119
Refractive index, 1: 119, 171
- Sperm candle**
Color temperature, 5: 247
Radiant power, 5: 244
- Sperm oil**
Compressibility, 2: 209
Ignition temperature, 2: 151
Properties, 2: 205
Viscosity, pressure, effect of, 2: 209
- Spermaceti**. *See* Waxes, animal.
- Sperrylite**
Density, 1: 125
X-ray diffraction data, 1: 342
- Spessartite**
Density, 1: 137
Refractive index, 1: 137, 165
Thermal expansion, 3: 44
- Sphalerite**
Compressibility, 3: 50
Density, 1: 118
Magnetic susceptibility, 6: 364
Piezoelectric constant, 6: 210
Pyroelectric constant, 6: 210
- Sphalerite**.—(Continued)
Refractive index, 1: 118, 165
Solution velocity in sulfuric acid, 5: 57
Specific heat, 5: 96
Thermal expansion, 3: 44
Transformation point, 1: 118
See also Zinc sulfide.
- Spheres**, air forces on, 1: 407
- Spherite**
Density, 1: 137
Refractive index, 1: 137, 170
- Spherochalcite**
Density, 1: 131
Refractive index, 1: 131, 167
See also Cobaltous carbonate.
- Spiauter** (alloy), 2: 383
- Spiegeleisen** (alloy), 2: 383
- Spinel**
Crystal nuclei, formation of, 5: 60
Density, 1: 142
Expansion on heating, 2: 84
Fusion temperature, 2: 83
Magnetic susceptibility, 6: 364
Melting point, 1: 142
Refractive index, 1: 142, 165
Thermal expansion, 3: 43
Verdet constant, 6: 426
- Spodumene**
Compressibility, 3: 50
Density, 1: 150
Melting point, 1: 150; 4: 85
Refractive index, 1: 150, 172; 7: 26
Specific heat, 5: 100
- Spoon metal**, 2: 384
- Sporting powders**, 7: 496
- Spray electricity**, 1: 359
- Spring deposits**, radioactivity, 1: 380
- Spruce wood**
Density, 2: 313
Thermal conductivity, 2: 313
- Spurrite**
Density, 1: 144
Refractive index, 1: 144, 172
- Square degree**, definition, 1: 41
- Stachyose**, heat of combustion, 5: 167
- Stainless iron**, 2: 384, 508, 603, 606
- Stainless steel**, 2: 384, 471, 508, 600, 603
- Stalloy**, 2: 384
Magnetic properties, 6: 374
- Standard cells**, 6: 312
- Stannic bromide**
Heat of formation, 5: 183
Heat of fusion, 5: 131
Magnetic susceptibility, 6: 356
-Aluminum bromide*
-Antimony pentachloride*
-Antimony tribromide*
-Antimony trichloride*
-Arsenous bromide*
-Bromine*
-Stannic chloride
Freezing point-solubility, 4: 49
-Stannic iodide
Boiling point, 3: 311
Freezing point-solubility, 4: 49
-Sulfur dioxide
Freezing point-solubility, 4: 42
-Titanium tetrabromide
Freezing point-solubility, 4: 49
-Zirconium bromide
Freezing point-solubility, 4: 49
- Stannic chloride**
Azeotropic mixtures, 3: 318
Boiling point, 3: 232, 329
Critical point data, 3: 232, 248
Density, 3: 23
Aqueous solution, 3: 63
Dielectric constant, 6: 76
Electrical conductivity, aqueous solution, 6: 231, 232
Entropy, 7: 247

* Data for system will be found under this compound in Index. Full explanation on page vii.

Stannic chloride.—(Continued)

- Free energy, **7**: 247
 Freezing point lowering of aqueous solution, **4**: 255
 Heat content, **7**: 247
 Heat of formation, **5**: 183
 Heat of fusion, **5**: 131
 Heat of vaporization, **5**: 136
 Internal pressure, **4**: 19
 Magnetic susceptibility, **6**: 356
 Orthobaric density, **3**: 232
 Photoelectric threshold, **6**: 68
 Specific heat
 Gas, **5**: 81
 Liquid, **5**: 106
 Solid, **5**: 96
 Vapor pressure
 Liquid, **3**: 214
 Solid, **3**: 207
 Vapor pressure above 1 atm., **3**: 232
 Verdet constant, **6**: 427
 Viscosity, **7**: 212
 -Aluminum chloride*
 -Anthracene*
 -Antimony pentachloride*
 -Antimony trichloride*
 -Antimony triiodide*
 -Arsenous iodide*
 -Benzene*
 -Carbon disulfide*
 -Chlorine*
 -Chloroform*
 -Ethyl acetate*
 -Ethyl benzoate*
 -Ethyl butyrate*
 -Ethyl ether*
 -Ethyl formate*
 -Ethyl propionate*
 -Hydrogen chloride*
 -Methyl butyrate*
 -Methyl formate*
 -Propyl formate*
 -Stannic bromide*
 -Stannic iodide
 Boiling point elevation, **3**: 329
 -Sulfur
 Boiling point elevation, **3**: 329
 Freezing point-solubility, **4**: 31
 -Sulfur dioxide
 Freezing point-solubility, **4**: 42
 -Xylene
 Distribution coefficients in water, **3**: 421

Stannic hydroxide

- Magnetic susceptibility, **6**: 356

Stannic iodide

- Density, **3**: 23
 X-ray diffraction data, **1**: 342,
 -Antimony pentachloride*
 -Antimony trichloride*
 -Arsenous bromide*
 -Arsenous chloride*
 -Benzene*
 -Carbon disulfide*
 -Iodine*
 -Methylene iodide*
 -Phosphorus trichloride*
 -Stannic bromide*
 -Stannic chloride*
 -Sulfur
 Freezing point-solubility, **4**: 31
 -Sulfur dioxide
 Freezing point solubility, **4**: 42

Stannic oxide

- Carbon monoxide, reaction with, **7**: 247
 Compressibility, **3**: 50
 Electrical conductivity, **6**: 153
 Heat of formation, **5**: 183
 Heat of transition, **5**: 183

Stannic oxide.—(Continued)

- Hydrogen, reaction with, **7**: 247
 Magnetic susceptibility, **6**: 356
 Photoelectric current, **6**: 69
 Refractive index, **7**: 20
 Aqueous solution, **7**: 70
 Specific heat, **5**: 96
 Thermal expansion, **3**: 43
 X-ray diffraction data, **1**: 342
 See also Cassiterite.
 -Sea salt*
Stannic sulfide
 Photoelectric current, **6**: 69
 Specific heat, **5**: 96
Stanniol (alloy), 2: 384
Stannite, density, 1: 130
Stannous bromide
 Ammines
 Decomposition pressure, **7**: 247
 Heat of decomposition, **7**: 247
 Heat of formation, **5**: 183
 Heat of formation, **5**: 183
 -Aluminum bromide*
 -Diethyl sulfide*
 -Pyridine*

Stannous chloride

- Ammines
 Decomposition pressure, **7**: 247
 Heat of decomposition, **7**: 247
 Heat of formation, **5**: 183
 Boiling point elevation in aqueous solution, **3**: 325
 Density, **3**: 23; **4**: 442
 Aqueous solution, **3**: 63
 Heat of formation, **5**: 183
 Magnetic susceptibility, **6**: 356
 Solubility in water, **4**: 219
 Specific heat, **5**: 96
 Surface tension, **4**: 442
 Verdet constant, **6**: 426
 Aqueous solution, **6**: 427
 -Acetone*
 -Aluminum chloride*
 -Antimony trichloride*
 -Cadmium chloride*
 -Calcium chloride*
 -Cobaltous chloride*
 -Cuprous chloride*
 -Diethyl sulfide*
 -Ethyl acetate*
 -Ethyl alcohol*
 -Hydrogen chloride*
 -Lead chloride*
 -Magnesium chloride*
 -Manganous chloride*
 -Methyl acetate*
 -Potassium chloride*
 -Pyridine*
 -Sodium chloride*
 -Thallium monobromide
 Freezing point-solubility, **4**: 49
 -Zinc chloride
 Freezing point-solubility, **4**: 49

Stannous hydroxide

- Heat of formation, **5**: 183

Stannous iodide

- Ammines
 Decomposition pressure, **7**: 247
 Heat of decomposition, **7**: 247
 Heat of formation, **5**: 183
 Heat of formation, **5**: 183
 Phototropy, **7**: 167
 Solubility in water, **4**: 219

Stannous oxide

- Heat of formation, **5**: 183
 Magnetic susceptibility, **6**: 356
 Photoelectric current, **6**: 69
 Reduction with carbon, **7**: 247
 Thermoelectric power, **6**: 224
 X-ray diffraction data, **1**: 342
 -Hydrogen*

Stannous sulfate

- Magnetic susceptibility, **6**: 356

Stannous sulfide

- Electrical conductivity, **6**: 148
 Heat of formation, **5**: 183
 Photoelectric current, **6**: 69
 Specific heat, **5**: 96
 -Antimony trisulfide*
 -Ferrous sulfide*
 -Lead sulfide*

Starch

- Diffusion in water, **5**: 71
 Heat of combustion, **5**: 167
 Heat of swelling, **5**: 143
 Heat of wetting, **5**: 143
 Hydrolysis by enzymes, **7**: 154
 Viscosity, **2**: 221

Stars

- Classification, **1**: 384
 Densities, **1**: 385
 Diameters, **1**: 385
 Distribution, **1**: 385
 Intrinsic brightness, **1**: 386
 Masses, **1**: 384
 Motions, **1**: 389
 Moving clusters, **1**: 390
 Physical properties, **1**: 384
 Temperatures, **1**: 385
 Velocities, **1**: 390

Statuary bronze, 2: 384; cf. 475, 476, 559-572**Staurolite**

- Density, **1**: 138
 Refractive index, **1**: 138, 172; **7**: 22
 Thermal conductivity, **5**: 231
 Thermal expansion, **3**: 43

Steam

- Dielectric constant, **6**: 78
 Superheated, pressure-volume relations, **3**: 436

Steam bronze, 2: 384, 567**Steam metal, mechanical properties, 2**: 570**Steam turbine oils, physical properties, 2**: 158**Stearic acid**

- Absorption spectra, **5**: 334, 353
 Cryoscopic constant, **4**: 184
 Diffusion in ethyl alcohol, **5**: 74
 Electrical conductivity, **6**: 146
 Esterification constant, **7**: 138
 Heat of combustion, **5**: 166
 Heat of fusion, **5**: 134
 Melting point under pressure, **4**: 10
 Rubber softener, **2**: 278
 Specific heat
 Liquid, **5**: 113
 Solid, **5**: 105
 Viscosity, liquid, **7**: 222
 -Acetone*
 -Amyl acetate*
 -Arachidic acid*
 -Benzene*
 -Carbon disulfide*
 -Carbon tetrachloride*
 -Chloroform*
 -Cholesterol*
 -Ethyl acetate*
 -Ethyl alcohol*
 -Ethyl chloroacetate*
 -Ethyl ether*
 -Hexane*
 -Isoamyl acetate*
 -Isoamyl alcohol*
 -Lauric acid*
 -Lignoceric acid*
 -Myristic acid*
 -Naphthalene*
 -Nitrobenzene*
 -Oleic acid*
 -Oleic acid*-Palmitic acid
 -Palmitic acid*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Stearic acid.—(Continued)

- Palmitic acid*-Tripalmitin
- Palmitic acid*-Tristearin
- Propyl butyrate*
- Quinoline*
- Toluene
- Density, **3**: 188
- Tripalmitin
- Freezing point-solubility, **4**: 181
- Tripalmitin-Tristearin
- Freezing point-solubility, **4**: 172
- Tristearin
- Freezing point-solubility, **4**: 166
- Stearin, rubber softener, **2**: 278
- Stearine pitch. *See* Pitches.
- Stearolic acid
- Absorption spectra, **5**: 353
- Heat of combustion, **5**: 166
- Stearonitrile, "surface vapor pressure," **4**: 476
- Steatite
- Bulk density, **2**: 52
- Compressive strength, **2**: 48
- Elasticity, **2**: 52
- Hardness, **2**: 50
- Impact hardness, **2**: 51
- Shearing strength, **2**: 49
- See also* Soapstone.
- Steel
- Absorption, index of, **5**: 249
- Acoustic resistivity, **6**: 459
- Aircraft, British specifications, **2**: 387
- Alloy, thermal expansion, **2**: 472
- Automotive, British specifications, **2**: 387
- Calorized, emission, spectral, **5**: 244
- Carbon monoxide, permeability to, **5**: 76
- Demagnetization by impact, **6**: 441
- Electrical conductivity, **6**: 174
- Heat treatment, effect of, **6**: 200
- Emission, spectral, **5**: 253
- Ettingshausen effect, **6**: 419
- Heat of elastic extension, **5**: 147
- Heat of plastic extension, **5**: 147
- Joule effect, **6**: 440
- Krupp, specific heat, **5**: 119
- Invar, thermal expansion, **2**: 471
- Kerr constant, **6**: 435
- List of, **2**: 390
- Magnet, **6**: 385
- Magnetization by rotation, **6**: 347
- Nernst effect, **6**: 420, 421
- Nitrogen, permeability to, **5**: 76
- Oxidized, emission, spectral, **5**: 244
- Refraction, index of, **5**: 249
- Righi-Leduc effect, **6**: 421
- Sound, transmission of, by, **6**: 459
- Sound, velocity of, in, **6**: 459, 465
- Specific heat, **5**: 118
- Spring, British specifications, **2**: 388
- Stainless
- Endurance limits, **2**: 600, 603, 606
- Thermal expansion, **2**: 471
- Thermal conductivity, **5**: 220, 221
- Thermal expansion, **2**: 466, 470
- Thermoelectric power, **6**: 222
- Valve, British specifications, **2**: 388
- Viscosity, **5**: 8, 9
- Wiedemann effect, **6**: 441
- X-ray diffraction data, **1**: 349; **2**: 356
- See also* Names of various steels.
- Steel wool
- Density, **2**: 313
- Thermal conductivity, **2**: 313
- Stefan-Boltzmann constant, **1**: 34; **5**: 237
- Stefan's constant, **1**: 18, 34, 41
- Steinmetz coefficient, **6**: 370
- Stellerite
- Density, **1**: 145
- Refractive index, **1**: 145, 169

- Stellite, **2**: 384, 468, 593
- Compositions, typical, **2**: 593
- Emission, spectral, **5**: 254
- Hardness, **2**: 593
- Thermal expansion, **2**: 468
- Stephanite
- Density, **1**: 124
- Photoconductivity, **6**: 66
- Stephenson's alloy, **2**: 384
- Steradian, definition, **1**: 41
- Stercorite
- Density, **1**: 151
- Refractive index, **1**: 151, 168
- Sterlin (alloy), **2**: 384, *cf.* 480
- Sterling metal, **2**: 384, 556
- Stereotype metal, **2**: 384
- Sterro metal, **2**: 384; *cf.* 556
- Stewartite
- Density, **1**: 127
- Refractive index, **1**: 127, 172
- Stibene
- Density, **3**: 23
- Gas, **3**: 3
- Dielectric constant, **6**: 76
- Heat of formation, **5**: 180
- Solubility in organic liquids, **3**: 263
- Solubility in water, **3**: 259
- Stibiotantalite, refractive index, **7**: 22
- Stibnite
- Compressibility, **3**: 50
- Thermal conductivity, **5**: 231
- Thermal expansion, **3**: 44
- See also* Antimony trisulfide.
- Stichtite
- Density, **1**: 142
- Refractive index, **1**: 142, 166
- Stilbene
- Absorption spectra, ultra-violet, **5**: 350, 378
- Bromination, photochemical, **7**: 165, 169
- Cryoscopic constant, **4**: 184
- Crystallography, **1**: 333
- Heat of combustion, **5**: 164
- Heat of fusion, **5**: 134
- Magnetic susceptibility, **6**: 363
- Photoconductivity, **6**: 66
- Verdet constant, **6**: 431
- Aminoazobenzene*
- Antimony tribromide*
- Antimony trichloride*
- Azobenzene*
- Azonaphthalene*
- Azotoluene*
- Benzalaniline*
- Benzil*
- Benzylaniline*
- Benzylideneaniline*
- Cyclohexane*
- Dibenzyl*
- p-Dimethoxystilbene*
- Hydrazobenzene*
- Picric acid*
- Quinoline*
- Styphnic acid
- Freezing point-solubility, **4**: 122
- Tolane
- Freezing point-solubility, **4**: 163
- Toluene
- Boiling point elevation, **3**: 346
- Stokesite
- Density, **1**: 144
- Refractive index, **1**: 144, 171
- Stolzite
- Density, **1**: 134
- Refractive index, **1**: 134, 168
- Stone bronze (alloy), **2**: 384, 556
- Stoneware, **2**: 65
- See also* Porcelain, Whiteware.
- Stopping potential, **6**: 61
- Strain, definition, **1**: 42

Straw

- Density, **2**: 313
- Thermal conductivity, **2**: 313
- Strengite
- Density, **1**: 129
- Refractive index, **1**: 129, 172
- Strength properties, definitions, **2**: viii
- Stress
- Conversion factors, **1**: 24
- Definition, **1**: 42
- Stromeyerite, density, **1**: 124
- Strontianite. *See* Strontium carbonate.
- Strontium
- Ammine
- Decomposition pressure, **7**: 297
- Heat of decomposition, **7**: 297
- Boiling point, **1**: 102; **3**: 205
- Cathodoluminescence, **5**: 390
- Compressibility, **3**: 49
- Critical potentials, **6**: 72
- Density, **1**: 105; **2**: 456
- Electrical conductivity, **1**: 105; **6**: 136, 137, 138
- Electrons freed by X-rays, energy of, **6**: 4
- Emission spectra, **5**: 314
- Heat of vaporization, **1**: 102
- Isotopes, **1**: 47
- Magnetic susceptibility, **6**: 356
- Melting point, **1**: 105
- Persistent lines, **5**: 324
- Quantum numbers, **5**: 408
- Spectral series, **5**: 405
- Thermochemistry, **5**: 197
- Vapor pressure, **3**: 205
- X-ray absorption limits, **6**: 38
- X-ray emission spectra, **6**: 37
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption coefficient, **6**: 13
- Zeeman effect, **5**: 420
- Arsenic*
- Boron*
- Mercury*
- Strontium acetate
- Density, aqueous solution, **3**: 75; **7**: 72
- Electrical conductivity, aqueous solution, **6**: 241, 246, 254
- Freezing point lowering of aqueous solution, **4**: 258
- Heat of formation, **5**: 198
- Refractive index, aqueous solution, **7**: 72
- Solubility in water, **4**: 231
- Specific heat, aqueous solution, **5**: 123
- Surface tension, aqueous solution, **4**: 465
- Viscosity, aqueous solution, **5**: 15
- Acetic acid*
- Ammonium sulfate*
- Strontium aluminum orthosilicate, melting point, **4**: 85
- Strontium amide, heat of formation, **5**: 197
- Strontium antimonyl tartrate
- Crystallography, **1**: 322
- Refractive index, **1**: 146, 168
- Strontium arsenate, heat of formation, **5**: 198
- Strontium benzoate, solubility in water, **4**: 232
- Strontium bicarbonate
- Free energy of ionization, **7**: 299
- Ionization constant, **7**: 299
- Strontium bromate
- Density, aqueous solution, **3**: 74
- Electrical conductivity, aqueous solution, **6**: 246, 254
- Strontium bromide
- Ammine
- Decomposition pressure, **7**: 298
- Heat of decomposition, **7**: 298
- Heat of formation, **5**: 198
- Boiling point elevation in aqueous solution, **3**: 325

Strontium bromide.—(Continued)

Compressibility, **3**: 50
 Decomposition pressure of hydrate, **7**: 298
 Density, aqueous solution, **3**: 74
 Electrical conductivity, aqueous solution, **6**: 234, 239
 Freezing point lowering of aqueous solution, **4**: 258
 Heat of formation, **5**: 197
 Magnetic susceptibility, **6**: 360
 Solubility in water, **4**: 231
 Transference number, **6**: 311
 Vapor pressure lowering in aqueous solution, **3**: 296
 -Arsenous oxide*
 -Ethyl alcohol*
 -Lead bromide*
 -Lead chloride*
 -Lithium bromide*
 -Mercuric bromide*
 -Potassium bromide*
 -Sodium bromide*
 -Strontium hydroxide
 Freezing point-solubility in water, **4**: 318, 387; **7**: 342
 -Strontium nitrate
 Density, aqueous solution, **3**: 98
 Freezing point-solubility in water, **4**: 316
Strontium d-camphorate
 -Camphoric acid*
Strontium carbonate
 Carbonic acid, reaction with, **7**: 299
 Compressibility, **3**: 50
 Decomposition pressure, **7**: 299
 Density, **1**: 146
 Dielectric constant, **6**: 100
 Emission, spectral, **5**: 259
 Free energy of decomposition, **7**: 299
 Heat of decomposition, **7**: 299
 Heat of formation, **5**: 198
 Magnetic susceptibility, **6**: 360
 Melting point, **1**: 146
 Reflectivity, selective, **5**: 260
 Refractive index, **1**: 146, 172
 Residual rays, **5**: 261
 Specific heat, **5**: 99
 Transition temperature, **4**: 7
 -Sodium chloride*
 -Sodium sulfate*
 -Strontium chloride
 Freezing point-solubility, **4**: 64
Strontium chlorate
 Density, **1**: 146
 Aqueous solution, **3**: 74, 105
 Electrical conductivity, aqueous solution, **6**: 246, 254
 Melting point, **1**: 146
 Refractive index, **1**: 146, 166, 171; **7**: 25
 Aqueous solution, **7**: 72
 Solubility in water, **4**: 231
Strontium chloride
 Absorption spectra, solutions, **5**: 327, 329
 Ammines
 Decomposition pressure, **7**: 298
 Heat of decomposition, **7**: 298
 Heat of formation, **5**: 198
 Boiling point elevation in aqueous solution, **3**: 325
 Compressibility, **3**: 50
 Aqueous solution, **3**: 439
 Concentration cells, **6**: 327
 Density, **1**: 146
 Aqueous solution, **3**: 74, 108
 Liquid, **3**: 23
 Electrical conductivity, **6**: 149
 Aqueous solution, **6**: 231, 233, 239
 Freezing point lowering of aqueous solution, **4**: 257

Strontium chloride.—(Continued)

Heat of dilution with water, **5**: 161
 Heat of formation, **5**: 197
 Heat of fusion, **5**: 131
 Hydrates
 Decomposition pressure, **7**: 298
 Heat of decomposition, **7**: 298
 Magnetic susceptibility, **6**: 360
 Melting point, **1**: 146
 Refractive index, **1**: 146, 165
 Aqueous solution, **7**: 72
 Solubility in water, **4**: 231
 Specific heat, **5**: 99
 Aqueous solution, **5**: 123
 Surface tension, aqueous solution, **4**: 465
 Thermal conductivity, aqueous solution, **5**: 229
 Transference number, **6**: 310, 311
 Transition temperature, **4**: 264
 Vapor pressure, aqueous solution, **3**: 368
 Vapor pressure lowering in aqueous solution, **3**: 296
 Viscosity, aqueous solution, **5**: 14
 X-ray diffraction data, **1**: 345
 X-rays, absorption coefficient, **6**: 13
 -Arsenous oxide*
 -Barium chloride*
 -Barium chloride*-Calcium chloride
 -Barium chloride*-Potassium chloride
 -Barium chloride*-Sodium chloride
 -Barium oxide*
 -Bismuth chloride*
 -Cadmium chloride*
 -Calcium chloride*
 -Calcium chloride*-Magnesium chloride-Sodium nitrate
 -Cupric chloride*
 -Ethyl alcohol*
 -Glycerol*
 -Glycocol*
 -Hydriodic acid*
 -Hydrogen bromide*
 -Hydrogen chloride*
 -Lead bromide*
 -Lead chloride*
 -Lithium chloride*
 -Magnesium chloride*
 -Magnesium nitrate*-Potassium nitrate-Sodium chloride
 -Manganous chloride*
 -Mercuric chloride*
 -Nitric acid*
 -Potassium chloride*
 -Potassium chloride*-Sodium chloride
 -Potassium iodide*
 -Potassium nitrate*
 -Sodium chloride*
 -Sodium nitrate*
 -Strontium carbonate*
 -Strontium fluoride
 Freezing point-solubility, **4**: 64
 -Strontium hydroxide
 Solubility in water, **7**: 342
 -Strontium malate
 Solubility in water, **7**: 343
 -Strontium nitrate
 Density, aqueous solution, **3**: 98
 Freezing point-solubility, **4**: 290
 -Strontium oxide
 Freezing point-solubility, **4**: 64
 -Strontium phosphate
 Freezing point-solubility, **4**: 64
 -Strontium sulfate
 Freezing point-solubility, **4**: 64
 -Thallium monochloride
 Freezing point-solubility, **4**: 53
 -Zinc chloride
 Freezing point-solubility, **4**: 54
Strontium chromate
 Reflectivity, selective, **5**: 260

Strontium cinnamate

Solubility in water, **4**: 232
Strontium cyanide
 Heat of formation, **5**: 198
Strontium dichromate
 Refractive index, **1**: 147, 172
Strontium dithionate
 Density, **1**: 146
 Heat of formation, **5**: 197
 Optical rotatory power, **7**: 353
 Refractive index, **1**: 146, 166; **7**: 25
 Solubility in water, **4**: 231
 Vapor pressure lowering in aqueous solution, **3**: 296
 -Ammonium dithionate*
 -Ethyl alcohol*
 -Lead dithionate*
 -Sodium dithionate*
Strontium ethanedisulfonate
 Crystallography, **1**: 322
 Density, **1**: 146
Strontium ethyl sulfate
 Crystallography, **1**: 322
 Density, **1**: 146
 Refractive index, **1**: 146, 169
Strontium ferrocyanide
 Density, aqueous solution, **3**: 75
 Electrical conductivity, aqueous solution, **6**: 241, 246, 254
 Osmotic pressure, **4**: 431
Strontium fluoride
 Band spectra, **5**: 416
 Electrical conductivity, aqueous solution, **6**: 258
 Heat of formation, **5**: 197
 Magnetic susceptibility, **6**: 360
 X-ray diffraction data, **1**: 345
 -Barium fluoride*
 -Strontium chloride*
 -Strontium phosphate
 Freezing point-solubility, **4**: 64
Strontium fluosilicate
 Decomposition pressure, **7**: 299
Strontium formate
 Crystallography, **1**: 322
 Density, **1**: 146
 Aqueous solution, **3**: 75
 Electrical conductivity, aqueous solution, **6**: 246, 254
 Heat of formation, **5**: 198
 Melting point, **1**: 146
 Optical rotatory power, **7**: 353
 Refractive index, **1**: 146, 170; **7**: 25
 Surface tension, aqueous solution, **4**: 465
Strontium hydride
 Heat of formation, **5**: 197
Strontium hydrogen arsenate
 Heat of formation, **5**: 198
Strontium hydrogen tartrate
 Pyroelectric constant, **6**: 210, 212
Strontium hydrosulfide
 Heat of formation, **5**: 197
 Solubility in water, **4**: 231
 -Strontium hydroxide
 Solubility in water, **7**: 342
Strontium hydroxide
 Decomposition pressure, **7**: 298
 Density, **1**: 146
 Aqueous solution, **3**: 74
 Diffusion in water, **5**: 66
 Electrical conductivity, aqueous solution, **6**: 246
 Freezing point lowering of aqueous solution, **4**: 257
 Heat of decomposition, **7**: 298
 Heat of formation, **5**: 197
 Hydrates
 Decomposition pressure, **7**: 298
 Heat of decomposition, **7**: 298
 Refractive index, **1**: 146, 166
 Solubility in water, **4**: 231

* Data for system will be found under this compound in Index. Full explanation on page vii.

Strontium hydroxide.—(Continued)

- Phenol*
- Strontium bromide*
- Strontium chloride*
- Strontium hydrosulfide*
- Strontium iodide
- Freezing point-solubility in water, **4**: 320; **7**: 342
- Strontium nitrate
- Density, aqueous solution, **3**: 98
- Freezing point-solubility in water, **4**: 364; **7**: 342
- Sucrose
- Freezing point-solubility in water, **4**: 422

Strontium iodide**Ammines**

- Decomposition pressure, **7**: 298
- Heat of decomposition, **7**: 298
- Heat of formation, **5**: 198
- Density, aqueous solution, **3**: 75, 108
- Electrical conductivity, aqueous solution, **6**: 235, 239
- Freezing point lowering of aqueous solution, **4**: 258
- Heat of formation, **5**: 197
- Magnetic susceptibility, **6**: 360
- Solubility in water, **4**: 231
- Sulfur dioxide complexes
- Decomposition pressure, **7**: 298
- Heat of decomposition, **7**: 298
- Transference number, **6**: 311
- Hydrogen chloride*
- Iodine*-Nitrobenzene
- Mercuric iodide*
- Potassium chloride*
- Strontium hydroxide*

Strontium malate

- Solubility in water, **4**: 231
- Strontium chloride*

Strontium manganate, electrical conductivity, aqueous solution, **6**: 246**Strontium metasilicate**

- Density, **1**: 146
- Melting point, **1**: 146; **4**: 84
- Refractive index, **1**: 146, 165; **7**: 26
- Calcium metasilicate*

Strontium molybdate

- Refractive index, **7**: 26
- Specific heat, **5**: 99

Strontium nitrate

- Absorption spectra, solutions, **5**: 329
- Boiling point elevation in aqueous solution, **3**: 326
- Density, **1**: 146
- Aqueous solution, **3**: 75, 105, 108
- Electrical conductivity, aqueous solution, **6**: 231, 238, 240
- Freezing point lowering of aqueous solution, **4**: 258
- Heat of dilution with water, **5**: 162
- Heat of formation, **5**: 197
- Melting point, **1**: 146
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 146, 165
- Aqueous solution, **7**: 72
- Solubility in water, **4**: 231
- Specific heat, **5**: 99
- Aqueous solution, **5**: 123
- Surface tension, aqueous solution, **4**: 465
- Thermal conductivity, aqueous solution, **5**: 229
- Vapor pressure, aqueous solution, **3**: 368
- Vapor pressure lowering in aqueous solution, **3**: 296
- Viscosity, aqueous solution, **5**: 14
- X-ray diffraction data, **1**: 345
- X-rays, absorption coefficient, **6**: 13
- Barium nitrate*
- Barium nitrate*-Magnesium chloride
- Ethyl alcohol*

Strontium nitrate.—(Continued)

- Formamide*
- Lead nitrate*
- Magnesium nitrate*-Potassium chloride-Potassium nitrate
- Potassium chloride*
- Potassium nitrate*
- Potassium nitrate*-Sodium nitrate
- Sodium chloride*
- Sodium nitrate*
- Strontium bromide*
- Strontium chloride*
- Strontium hydroxide*

Strontium nitride, heat of formation, **5**: 197**Strontium nitrite**

- Density, aqueous solution, **3**: 105
- Freezing point lowering of aqueous solution, **4**: 258
- Heat of formation, **5**: 197
- Solubility in water, **4**: 231
- Vapor pressure of aqueous solution, **3**: 368
- Silver nitrite*

Strontium nitrotetronate

- Crystallography, **1**: 322
- Density, **1**: 146
- Refractive index, **1**: 146, 171

Strontium orthosilicate

- Melting point, **4**: 84
- Refractive index, **7**: 26

Strontium oxalate

- Electrical conductivity, aqueous solution, **6**: 257
- Heat of formation, **5**: 198
- Solubility in water, **6**: 257
- Acetic acid*

Strontium oxide

- Band spectra, **5**: 416
- Electrons, thermal emission of, **6**: 54
- Heat of formation, **5**: 197
- Magnetic susceptibility, **6**: 360
- Melting point, **4**: 84
- Photoelectric threshold, **6**: 68
- Thermionic work function, **6**: 54, 56
- X-ray diffraction data, **1**: 345
- Barium chloride*
- Boric oxide*
- Calcium chloride*
- Calcium oxide*
- Carbon dioxide*
- Silica*
- Strontium chloride*

Strontium perchlorate

- Acetone*
- Butyl alcohol*
- Ethyl acetate*
- Ethyl alcohol*
- Isobutyl alcohol*
- Methyl alcohol*
- Propyl alcohol*

Strontium peroxide, heat of formation, **5**: 197**Strontium phosphate**

- Heat of formation, **5**: 198
- Reflectivity, selective, **5**: 260
- Strontium chloride*
- Strontium fluoride*

Strontium platincyanide

- Refractive index, **7**: 26

Strontium salicylate

- Density, aqueous solution, **3**: 105
- Ethyl alcohol*

Strontium selenide

- Heat of formation, **5**: 197
- X-ray diffraction data, **1**: 345

Strontium silicate

- Heat of formation, **5**: 198

Strontium succinate

- Solubility in water, **4**: 231
- Sodium succinate*

Strontium sulfate

- Compressibility, **3**: 50
- Density, **1**: 146
- Dielectric constant, **6**: 100
- Electrical conductivity, aqueous solution, **6**: 258
- Emission, spectral, **5**: 259
- Heat of formation, **5**: 197
- Magnetic susceptibility, **6**: 360
- Melting point, **1**: 146
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 146, 171; **7**: 25
- Specific heat, **5**: 99
- Thermal expansion, **3**: 44
- Transition temperature, **4**: 7
- See also Celestite.

-Ammonium acetate***-Calcium chloride*****-Hydrogen chloride*****-Lithium sulfate*****-Magnesium chloride*****-Nitric acid*****-Potassium chloride*****-Potassium sulfate*****-Sodium carbonate*****-Sodium chloride*****-Sodium sulfate*****-Strontium chloride*****Strontium sulfide**

- Heat of formation, **5**: 197
- Phototropy, **7**: 167
- X-ray diffraction data, **1**: 345

Strontium tartrate

- Solubility in water, **4**: 231
- Acetic acid*

Strontium thiosulfate**-Lead thiosulfate*****Structural steel**, **2**: 384**Structures**, wind pressure on, **1**: 404**Struts**, air force on, **1**: 409**Struvite**

- Density, **1**: 141
- Refractive index, **1**: 141, 169

Strychnine

- Absorption spectra, **5**: 354
- Crystallography, **1**: 336
- Electrical conductivity, aqueous solution, **6**: 302
- Heat of combustion, **5**: 168
- Optical rotatory power, **7**: 473
- Ammonia*
- Chloroform*
- Ethyl alcohol*

Strychnine nitrate**-Ethyl alcohol*****Strychnine sulfate**

- Crystallography, **1**: 337
- Optical rotatory power, **7**: 354

Strychnine sulfopropionate

- Solubility in water, **4**: 219

Strychnine d-tartrate

- Strychnine l-tartrate
- Freezing point-solubility in water, **4**: 375

Stucco. See Magnesia concretes.**Stuffing box alloy**, **2**: 384**Stylotipite**, density, **1**: 123**Styphnic acid**

- Solubility in water, **4**: 253
- Acenaphthene*
- Anthracene*
- α -Benzyl naphthalene*
- Bromonaphthalene (α -, β -)*
- Camphor*
- α -Chloronaphthalene*
- Dibenzyl*
- Diphenyl*
- Diphenylmethane*
- Fluorene*
- Glycol diacetate*
- Hydrogen chloride*

* Data for system will be found under this compound in Index. Full explanation on page vii.

Styphnic acid.—(Continued)

- Naphthalene*
- Nitric acid*
- Nitroacenaphthene*
- α -Nitronaphthalene*
- Phenanthrene*
- Retene*
- Stilbene*
- 1, 3, 5-Trinitrobenzene
- Freezing point-solubility, **4**: 118
- 2, 4, 6-Trinitrotoluene
- Freezing point-solubility, **4**: 121
- 2, 4, 6-Trinitro-*m*-xylene
- Freezing point-solubility, **4**: 122
- Triphenylmethane
- Freezing point-solubility, **4**: 122

Styrcitol, optical rotatory power, **7**: 389

Styrene

- Absorption spectra, **5**: 343
- Azeotropic mixtures, **3**: 321, 322
- Birefringence, magnetic, **7**: 111
- Heat of combustion, **5**: 163
- Magnetic susceptibility, **6**: 362
- Refractive index, **7**: 42
- Surface tension, **4**: 437, 457
- Viscosity, **7**: 219

Suberic acid

- Electrical conductivity, aqueous solution, **6**: 288
- Heat of combustion, **5**: 165
- Solubility in water, **4**: 253
- Acetic acid*
- Ethyl ether*
- Hydrogen chloride*
- Nitric acid*
- Sulfuric acid
- Freezing point-solubility in water, **4**: 398

Suberone

- Absorption spectra, ultra-violet, **5**: 369
- Viscosity, **7**: 219

Succinamide

- Density, aqueous solution, **3**: 114
- Dielectric constant, **6**: 87
- Heat of combustion, **5**: 167

Succinic acid

- Absorption spectra, **5**: 337, 375
- Boiling point elevation in aqueous solution, **3**: 327
- Density, aqueous solution, **3**: 112, 114; **7**: 68
- Diffusion in water, **5**: 70
- Electrical conductivity, aqueous solution, **6**: 266
- Freezing point lowering of aqueous solution, **4**: 262
- Heat of combustion, **5**: 165
- Heat of solution in water, **5**: 148
- Magnetic susceptibility, **6**: 361
- Refractive index, **7**: 29
- Aqueous solution, **7**: 68
- Solubility in water, **4**: 251, 253
- Specific heat, **5**: 102
- Surface tension, aqueous solution, **4**: 468
- Vapor pressure, aqueous solution, **3**: 365
- Vapor pressure lowering in aqueous solution, **3**: 293
- Viscosity, aqueous solution, **5**: 21
- Acetic acid*
- Acetone*
- Ammonium succinate*
- Amyl alcohol*
- Amyl ether*
- Catechol*
- Chloroform*
- 2, 4-Dinitrophenol*
- Ethyl alcohol*
- Ethyl ether*
- Formic acid*
- Glycerol*
- Hydrogen bromide*

Succinic acid.—(Continued)

- Hydrogen chloride*
- Hydroquinol*
- Lithium chloride*
- Methyl alcohol*
- Molybdenum trioxide*
- Naphthol (α -, β -)*
- Nitric acid*
- Nitrophenol (*m*-, *p*-)*
- Phenol*
- Picric acid*
- Potassium bromide*
- Potassium chloride*
- Potassium iodide*
- Potassium succinate*
- Pyridine*
- Pyrogallol*
- Resorcinol*
- Sodium chloride*
- Sodium succinate*
- Sulfuric acid
- Freezing point-solubility in water, **4**: 398

Succinic anhydride

- Cryoscopic constant, **4**: 183
- Heat of combustion, **5**: 166
- Heat of fusion, **5**: 132
- Hydration constant, **7**: 136
- Magnetic susceptibility, **6**: 361

Succinimide

- Absorption spectra, **5**: 336
- Boiling point elevation in aqueous solution, **3**: 327
- Crystallography, **1**: 324
- Dielectric constant, aqueous solution, **6**: 101
- Electrical conductivity, aqueous solution, **6**: 266
- Heat of combustion, **5**: 167
- Heat of solution in water, **5**: 148
- Magnetic susceptibility, **6**: 361
- Solubility in water, **4**: 251
- Catechol*
- 1, 4-Dihydroxynaphthalene*
- 1, 6-Dihydroxynaphthalene*
- 2, 3-Dihydroxynaphthalene*
- 2, 6-Dihydroxynaphthalene*
- 2, 4-Dinitrophenol*
- Ethyl alcohol*
- Hydroquinol*
- Naphthol (α -, β -)*
- Nitrophenol (*o*-, *m*-, *p*-)*
- Phenol*
- Picric acid*
- Pyrogallol*
- Resorcinol*

Succinonitrile

- Cryoscopic constant, **4**: 183
- Density, **3**: 28
- Electrical conductivity, **6**: 143
- Heat of fusion, **5**: 132
- Solubility in water, **3**: 387
- Pressure, effect of, **3**: 393
- Surface tension, **4**: 450
- Benzoic acid*
- Chloroform*
- Ethyl alcohol*
- Ethyl ether*
- Silver nitrate*
- Sodium chloride*

Succinyl chloride

- Refractive index, **7**: 35
- Surface tension, **4**: 450
- Verdet constant, **6**: 428

Sucrose

- Absorption spectra, **5**: 349
- Boiling point elevation in aqueous solution, **3**: 328
- Clerget analysis, **2**: 353
- Compressibility, aqueous solution, **3**: 440

Sucrose.—(Continued)

- Density, **3**: 45
- Aqueous solution, **2**: 342; **7**: 69
- Dielectric constant, **6**: 99
- Aqueous solution, **6**: 101
- Freezing point lowering of aqueous solution, **4**: 263
- Freezing point-solubility in water, **2**: 345
- Grating spaces of, **6**: 7
- Heat of combustion, **5**: 166
- Heat of dilution with water, **5**: 161
- Heat of solution in water, **5**: 150
- Hydrolysis, **2**: 345
- Reaction velocity of, **2**: 345
- Hydrolysis by enzymes, **7**: 154
- Hydrolysis by invertase, **2**: 345
- Inversion, kinetics of, **7**: 127
- Magnetic susceptibility, **6**: 364
- Optical rotation, **2**: 336
- Osmotic pressure, **4**: 429
- Refractive index, **7**: 30
- Aqueous solution, **2**: 337; **7**: 69
- Solubility
- Aqueous acetone, **3**: 406
- Aqueous ethyl alcohol, **4**: 405, 406
- Methyl alcohol, **2**: 345
- Water, **2**: 344
- Specific heat, **5**: 104
- Aqueous solution, **5**: 125
- Surface tension, aqueous solution, **4**: 470
- Thermal conductivity, **5**: 216, 231, 233
- Aqueous solution, **5**: 229
- Vapor pressure, aqueous solution, **3**: 365
- Vapor pressure lowering in aqueous solution, **3**: 293
- Viscosity, aqueous solution, **5**: 23
- Acetone*
- Ammonia*
- Calcium hydroxide*
- Calcium sulfate*
- Ethyl alcohol*
- Ethyl alcohol*-Water
- Glucose*
- Hydrogen chloride*
- Hydrogen peroxide*
- Levulose*
- Lithium chloride*
- Mercuric chloride*
- Methyl acetate*
- Methylamine*
- Phthalic acid*
- Potassium dihydrogen phosphate*
- Potassium sulfate*
- Pyridine*
- Sodium bicarbonate*
- Sodium chloride*
- Sodium hydroxide*
- Sodium iodide*
- Sodium sulfate*
- Sodium tartrate*
- Sodium tartrate*-Tartaric acid
- Strontium hydroxide*
- Sucrose octoacetate
- Heat of combustion, **5**: 167
- Sugar scale, international, **2**: 335
- Sugar substitutes
- Relative sweetening power, **1**: 357
- Sugar-house products
- Dry substance in, **2**: 342
- Sugars
- Biochemical kinetics, **7**: 154
- Commercial, **2**: 334
- Derivatives, **2**: 353
- Heat of combustion, **5**: 166
- Heat of dilution, **5**: 161
- Melting points, **2**: 353
- Mutarotation, **2**: 334
- Optical rotation, **2**: 353
- Specific heat, aqueous solution, **5**: 125
- Sweetening power, **1**: 357

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sugars.—(Continued)

- Ureide formation, kinetics of, **7**: 128
- Viscosity, aqueous solution, **5**: 23
- Sugden's formula (surface tension), **4**: 434
- Suhler white copper, **2**: 384
- Sulfanilic acid, solubility in water, **4**: 252
- Sulfate ion, free energy, **7**: 236
- Sulfide ion, free energy, **7**: 236
- Sulfite ion, free energy, **7**: 236
- Sulfobenzoic acids, electrical conductivity, aqueous solution, **6**: 280
- o*-Sulfobenzoic acid *sym.*-chloride
 - o*-Sulfobenzoic acid *asym.*-chloride
 - Freezing point-solubility, **4**: 144
- m*-Sulfobenzoic acid *sym.*-chloride
 - Benzenedisulfonyl chloride (*m*-, *p*-)*
 - p*-Sulfobenzoic acid *sym.*-chloride
 - Freezing point-solubility, **4**: 178
- p*-Sulfobenzoic acid *sym.*-chloride
 - Benzenedisulfonyl chloride (*m*-, *p*-)*
- Sulfoborite
 - Density, **1**: 142
 - Refractive index, **1**: 142, 170
- Sulfonal
 - Benzene*
 - Isoamyl alcohol*
 - β-Naphthol*
 - β-Naphthol*-Phenyl salicylate
 - Phenyl salicylate*
 - Sulfur trioxide
 - Boiling point elevation, **3**: 328
 - Thionyl chloride
 - Boiling point elevation, **3**: 329
- Sulfonphthalein dyes
 - Absorption spectra, **7**: 188
 - Indicators, use as, **1**: 86
- Sulfur
 - Absorption spectra, solutions, **5**: 327
 - Albedo, **5**: 262
 - Allotropic forms, **4**: 11
 - Band spectra, **5**: 415
 - Boiling point, **1**: 53, 102; **3**: 325
 - Compressibility, **3**: 46
 - Compton effect, **6**: 18
 - Critical constants, **1**: 102; **3**: 202, 248
 - Critical potentials, **6**: 72
 - Density
 - Liquid, **1**: 102; **3**: 21
 - Solid, **1**: 104; **3**: 21
 - Dielectric constant, **6**: 75, 100
 - Electrical conductivity
 - Liquid, **1**: 103
 - Solid, **1**: 104; **6**: 141, 142, 153
 - X-rays, effect of, **6**: 6
 - Electrode potential, **7**: 236
 - Emission, spectral, **5**: 258
 - Emission spectra, **5**: 312
 - Entropy, **5**: 89
 - Free energy, **7**: 236
 - Dissociation, **7**: 236
 - Fusion, **7**: 236
 - Polymers, **7**: 236
 - Reaction with carbon monoxide, **7**: 244
 - Reaction with hydrogen, **7**: 237
 - Reaction with hydrogen iodide, **7**: 237
 - Reaction with sulfuric acid, **7**: 237
 - Reaction with water, **7**: 237
 - Transformation, **7**: 236
 - Vaporization, **7**: 236
 - Gamma rays, absorption coefficient, **6**: 21
 - Heat content, **5**: 89; **7**: 236
 - Heat of dissociation, **5**: 418
 - Heat of formation of polymers, **5**: 177
 - Heat of fusion, **1**: 104; **5**: 131; **7**: 326
 - Heat of transformation, **7**: 236
 - Heat of vaporization, **1**: 102; **5**: 135
 - Internal pressure, **4**: 19
 - Ionization, atomic, **6**: 122
 - Isotopes, **1**: 47

Sulfur.—(Continued)

- J*-Phenomenon, **6**: 1
- Magnetic susceptibility, **6**: 355
- Melting point, **1**: 104
- Melting point under pressure, **4**: 11
- Orthobaric density, **3**: 202
- Persistent lines, **5**: 324
- Photoelectric threshold, **6**: 68
- Pressure-volume relations for gas, **3**: 435
- Quantum numbers, **5**: 408
- Refractive index
 - Liquid, **7**: 11
 - Solid, **1**: 103; **7**: 8, 11, 17, 77
- Rubber, solubility in, **2**: 272
- Rubber, vulcanization of, with, **2**: 264
- Solubility in aqueous acetone, **4**: 268
- Solubility in organic solvents, **7**: 236
- Specific heat
 - Gas, **7**: 236
 - Liquid, **1**: 103; **5**: 94; **7**: 236
 - Solid, **1**: 104; **5**: 85, 89; **7**: 236
- Spectral series, **5**: 404
- Surface tension, **1**: 103; **4**: 442
- Thermal conductivity, **5**: 217
- Thermal expansion
 - Liquid, **3**: 21
 - Solid, **1**: 104; **3**: 21
- Thermochemistry, **5**: 177
- Thermodynamic potential, **5**: 89
- Transition temperature, **4**: 6
- Transmission of radiant energy by vapor, **5**: 269
- Vapor pressure, **3**: 201, 202
- Verdet constant, **6**: 426
- Viscosity, liquid, **7**: 212
- Volume change on melting, **4**: 11
- X-ray absorption limits, **6**: 36, 45
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 36
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption coefficient, **6**: 13-16
- X-rays, scattering, modification by, **6**: 17
 - Acetone*
 - Acetylene dichloride*
 - Allyl isothiocyanate*
 - Ammonia*
 - Amyl alcohol*
 - Aniline*
 - Anthraquinone*
 - Antimony*
 - Antimony trisulfide*
 - Arsenic*
 - Arsenous chloride*
 - Arsenous sulfide*
 - Benzene*
 - Bismuth*
 - Bismuth*-Tellurium
 - Bromine*
 - Bromoform*
 - Calcium sulfite*
 - Carbon*-Iron
 - Carbon*-Iron-Phosphorus
 - Carbon disulfide*
 - Carbon disulfide*-Iodine
 - Carbon disulfide*-Phosphorus
 - Carbon disulfide*-Selenium
 - Carbon monoxide*
 - Carbon tetrachloride*
 - Cesium*
 - Chlorine*
 - Chlorobenzene*
 - Chloroform*
 - Cobalt*
 - Copper*
 - Copper*-Oxygen
 - p*-Cresol*
 - p*-Dichlorobenzene*
 - Di-(2-chloroethyl) sulfide*
 - Diphenyl*
 - Ethyl alcohol*

Sulfur.—(Continued)

- Ethyl bromide*
- Ethyl ether*
- Ethyl formate*
- Ethylene bromide*
- Ethylene chloride*
- Fenchone*
- Glycerol*
- Heptane*
- Hexane*
- Hydrogen*
- Hydrogen disulfide*
- Iodine*
- Iron*
- Iron*-Phosphorus
- Lead*
- Mercuric bromide*
- Mercuric chloride*
- Methylene iodide*
- Naphthalene*
- α-Naphthoic acid*
- β-Naphthol*
- Nickel*
- Nitrobenzene*
- Pentachloroethane*
- Phenetole*
- Phenol*
- Phenyl isothiocyanate*
- Phosphorus*
- Quinoline*
- Rubidium*
- Selenium*
- Selenium*-Tellurium
- Selenium tetrachloride*
- Silver*
- Sodium*
- Sodium sulfide*
- Stannic chloride*
- Stannic iodide*
- Sulfur monochloride
 - Boiling point elevation, **3**: 328
- Tellurium
 - Boiling point elevation, **3**: 325
 - Equilibrium diagram, **2**: 441
 - Freezing point-solubility, **4**: 24
 - Specific heat, **5**: 121
- Tetrachloroethane
 - Freezing point-solubility, **4**: 35
- Tetrachloroethylene
 - Freezing point-solubility, **4**: 34
- Thallium
 - Freezing point-solubility, **4**: 25
- Thiophenecarboxylic acid
 - Freezing point lowering, **4**: 38
- Thymol
 - Freezing point lowering, **4**: 38
- Tin
 - Freezing point-solubility, **4**: 25
- Toluene
 - Boiling point elevation, **3**: 346
 - Density, **3**: 132
 - Freezing point-solubility, **4**: 35
 - Solubility, mutual, **3**: 394
- Trichloroethylene
 - Freezing point-solubility, **4**: 35
- m*-Xylene
 - Boiling point elevation, **3**: 346
 - Freezing point-solubility, **4**: 36
- Sulfur dichloride
 - Boiling point, **1**: 107, 162
 - Density, **1**: 107
 - Heat of formation, **5**: 178
 - Melting point, **1**: 107
 - Refractive index, **1**: 107, 165
 - Chlorine*
 - Ethyl chloride*
 - Phosgene*
 - Sulfur dioxide
 - Boiling point elevation, **3**: 328

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sulfur dioxide

Absorption spectra, **5**: 330
 Birefringence, electric, **7**: 110
 Boiling point, **1**: 107, 162; **3**: 213, 328
 Critical point data, **3**: 236, 248
 Decomposition pressure of hydrate, **7**: 236
 Density
 Aqueous solution, **3**: 55
 Gas, **3**: 3, 16
 Liquid, **3**: 22, 228
 Saturated vapor, **3**: 236
 Dielectric constant
 Gas, **6**: 74, 79
 Liquid, **6**: 76
 Dispersion formula, **7**: 11
 Electrical conductivity, **6**: 142
 Electrons, absorption of, by, **6**: 61
 Free energy, **7**: 236
 Reaction with carbon monoxide, **7**: 244
 Reaction with chlorine, **7**: 237
 Reaction with hydrogen, **7**: 237
 Reaction with oxygen, **7**: 236
 Solution, **7**: 236
 Free energy in water, **7**: 236
 Heat of adsorption on charcoal, **5**: 140
 Heat of adsorption on meerschaum, **5**: 141
 Heat of adsorption on silica gel, **5**: 141
 Heat of formation, **5**: 177
 Heat of vaporization, **3**: 328; **5**: 136, 138
 Ionization by α -particles, **6**: 122
 Ionization by β -particles, **6**: 121
 Ionization by γ -rays, **6**: 123
 Ionization by X-rays, **6**: 123
 Ions, mobility of, in, **6**: 111
 Ions, recombination of, in, **6**: 115
 Magnetic susceptibility, **6**: 356
 Melting point, **1**: 107
 Orthobaric density, **3**: 236
 Polarization of light scattered by liquid, **5**: 266
 Refractive index
 Gas, **7**: 8
 Liquid, **1**: 107
 Solubility in
 Aqueous solutions, **3**: 274
 Copper, molten, **3**: 270
 Copper alloys, **3**: 270
 Non-aqueous liquids, **3**: 264
 Sulfuric acid, **3**: 274
 Water, **3**: 258
 Sound, velocity of, in, **6**: 462
 Specific heat
 Gas, **5**: 80, 81; **7**: 236
 Liquid, **5**: 114
 Solid, **5**: 95
 Surface tension, **4**: 442
 Thermal conductivity, **5**: 213
 Thermal expansion, **3**: 16
 Toxicology, **2**: 320
 Transmission of radiant energy, **5**: 270
 Vapor pressure
 Aqueous solution, **3**: 302, 361
 Liquid, **3**: 213, 236
 Solid, **3**: 207
 Vapor pressure above 1 atm., **3**: 236
 Verdet constant, **6**: 425, 426
 Dispersion, **6**: 433
 Viscosity
 Gas, **5**: 3
 Liquid, **5**: 27; **7**: 212
 X-rays, absorption coefficient, **6**: 13, 16
 -Acetanilide*
 -Acetic acid*
 -Acetic anhydride*
 -Acetone*
 -Ammonium iodide*
 -Ammonium thiocyanate*
 -Benzene*

Sulfur dioxide.—(Continued)

-Benzoic acid*
 -Benzoic anhydride*
 -Benzylammonium chloride*
 -Bromine*
 -Camphor*
 -Carbon dioxide*
 -Carbon disulfide*
 -Carbon tetrachloride*
 -Cetene*
 -Cetyl alcohol*
 -Chlorine*
 -Chlorine*-Sulfuryl chloride
 -Chloroform*
 -Copper*
 -Cupric oxide*
 -Cuprous oxide*
 -Cuprous sulfide*
 -Cyclohexane*
 -Cyclohexanone*
 -Dichlorobenzene*
 -Diethylammonium chloride*
 -Disoamyl*
 -Dimethylammonium chloride*
 -Ethane*
 -Ethyl ether*
 -Ethylammonium chloride*
 -Heptane*
 -Hexane*
 -Hydrogen*
 -Hydrogen bromide*
 -Hydrogen chloride*
 -Isobutyl tartrate*
 -Lead*
 -Mercuric bromide*
 -Methyl alcohol*
 -Methyl chloride*
 -Methyl ether*
 -Methylammonium chloride*
 -Naphthalene*
 - β -Naphthol picrate*
 -Octane*
 -Potassium iodide*
 -Potassium thiocyanate*
 -Rubidium iodide*
 -Sodium iodide*
 -Stannic bromide*
 -Stannic chloride*
 -Stannic iodide*
 -Sulfur dichloride*
 -Sulfur monochloride
 Boiling point elevation, **3**: 328
 -Sulfuric acid
 Density, aqueous solution, **3**: 96
 -Sulfuryl chloride
 Freezing point-solubility, **4**: 42
 -Tetraethylammonium iodide
 Boiling point elevation, **3**: 328
 -Tetramethylammonium bromide
 Boiling point elevation, **3**: 328
 -Tetramethylammonium chloride
 Boiling point elevation, **3**: 328
 -Tetramethylammonium iodide
 Boiling point elevation, **3**: 328
 -Titanium tetrachloride
 Freezing point-solubility, **4**: 42
 -Toluene
 Boiling point elevation, **3**: 328
 Density, **3**: 135
 Viscosity, **5**: 27
 -Triethylammonium chloride
 Boiling point elevation, **3**: 328
 -Trimethylammonium chloride
 Boiling point elevation, **3**: 328
 -Trimethylsulfonium iodide
 Boiling point elevation, **3**: 328
 -Triphenylmethane
 Boiling point elevation, **3**: 328
 -Xylene
 Density, **3**: 135
 Viscosity, **5**: 27

Sulfur hexafluoride, refractivity, 7: 8**Sulfur monobromide**

Boiling point, **1**: 107, 162
 Density, **1**: 107
 Heat of formation, **5**: 178
 Melting point, **1**: 107
 Refractive index, **1**: 107, 165
 -Bromine*

Sulfur monochloride

Boiling point, **1**: 107, 162; **3**: 328
 Density, **1**: 107; **3**: 22
 Dielectric constant, **6**: 76
 Heat of formation, **5**: 178
 Heat of vaporization, **5**: 136
 Internal pressure, **4**: 19
 Melting point, **1**: 107
 Refractive index, **1**: 107, 165
 Rubber, vulcanization of, with, **2**: 265
 Specific heat, **5**: 106
 Surface tension, **4**: 447
 Vapor pressure, **3**: 213
 Verdet constant, **6**: 426
 -Anthracene*
 -Benzene*
 -Camphor*
 -Carbon tetrachloride*
 -Chlorine*
 -Ethyl chloride*
 -Phosgene*
 -Selenium*
 -Sulfur*

Sulfur pentoxydichloride

Density, **3**: 22
 Heat of formation, **5**: 178
 Heat of vaporization, **5**: 136
 -Chlorosulfonic acid*

Sulfur trioxide

Boiling point, **3**: 228, 328
 Critical point data, **3**: 228, 248
 Density, liquid, **3**: 22
 Dielectric constant, **6**: 76
 Free energy, **7**: 236
 Formation, **7**: 236
 Heat of formation, **5**: 177
 Heat of fusion, **5**: 131
 Heat of vaporization, **5**: 136
 Magnetic susceptibility, **6**: 356
 Melting point, **4**: 6
 Orthobaric density, **3**: 228
 Photochemical formation, **7**: 164
 Refractivity of vapor, **7**: 8
 Surface tension, **4**: 447
 Toxicology, **2**: 320
 Transition temperature, **4**: 7
 Vapor pressure
 Liquid, **3**: 213
 Solid, **3**: 207
 Vapor pressure above 1 atm., **3**: 228
 -Chromium trioxide*
 -Ferric sulfate*
 -Sulfonal*
 -Sulfuric acid
 Boiling point, **3**: 304
 Boiling point elevation, **3**: 328
 Density, aqueous solution, **3**: 96
 -Trional
 Boiling point elevation, **3**: 328

Sulfuric acid

Absorption spectra, solutions, **5**: 327
 Activity coefficients, **7**: 237
 Adsorption on wool, **3**: 252
 Boiling point, **3**: 302, 328
 Boiling point elevation in aqueous solution, **3**: 325
 Compressibility, **3**: 35, 439
 Concentration cells, **6**: 323
 Cryoscopic constant, **4**: 214
 Density, **1**: 107; **3**: 22
 Aqueous solution, **3**: 56, 107

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sulfuric acid.—(Continued)

- Dielectric constant, **6**: 76
- Aqueous solution, **6**: 104
- Diffusion in water, **5**: 64
- Drying agent, value as, **3**: 385
- Electrical conductivity, **6**: 142
- Aqueous solution, **6**: 241, 242
- Emission, spectral, **5**: 259
- Free energy
 - Aqueous solutions, **7**: 237
 - Ionization, **7**: 237
 - Ions, **7**: 237
 - Reaction with sulfur, **7**: 237
- Freezing mixtures, use in, **1**: 64
- Freezing point lowering of aqueous solution, **4**: 254, 255
- Fuming, vapor pressure, partial, **3**: 304
- Heat capacity, partial molal, **7**: 237
- Heat content, partial molal, **7**: 237
- Heat of adiabatic expansion, aqueous solution, **5**: 147
- Heat of formation, **5**: 178
- Aqueous solution, **5**: 212
- Heat of fusion, **5**: 131
- Heat of vaporization, **3**: 302; **5**: 136
- Magnetic rotatory power, **6**: 431
- Magnetic susceptibility, **6**: 356
- Melting point, **1**: 107; **4**: 6
- Reflectivity, selective, **5**: 260
- Refractive index, **1**: 107, 165
- Aqueous solution, **7**: 65
- Dispersion, **7**: 100
- Solubility in water, **4**: 217
- Sound, velocity of, in, **6**: 464
- Specific heat
 - Aqueous solution, **5**: 115
 - Liquid, **5**: 114
 - Solid, **5**: 95
- Surface tension, aqueous solution, **4**: 464
- Thermal conductivity, aqueous solution, **5**: 229
- Transference number, **6**: 310, 311
- Vapor pressure, **3**: 302
- Aqueous solution, **3**: 303
- Vapor pressure lowering in aqueous solution, **3**: 293
- Verdet constant
 - Aqueous solution, **6**: 426
 - Liquid, **6**: 426
- Viscosity, **5**: 11, 26
- Aqueous solution, **5**: 12
- X-rays, absorption coefficient, **6**: 13
- Acetic acid*
- Acetophenone*
- Aluminum sulfate*
- Ammonia*
- Ammonium chloride*
- Ammonium gallium sulfate*-Ethyl alcohol
- Ammonium hydroxide*
- Ammonium nitrate*
- Ammonium sulfate*
- Amyl alcohol*
- Arsenous oxide*
- Auric hydroxide*
- Barium chloride*
- Barium nitrate*
- Barium sulfate*
- Benzoic acid*
- Benzoic anhydride*
- Benzophenone*
- Beryllium sulfate*
- Boric oxide*
- Cadmium sulfate*
- Caffeine*
- Calcium acetate*-Potassium sulfate
- Calcium chloride*
- Calcium chloride*-Potassium sulfate
- Calcium nitrate*
- Calcium nitrate*-Potassium sulfate
- Calcium phosphate*

Sulfuric acid.—(Continued)

- Calcium phosphate*-Potassium sulfate
- Calcium sulfate*
- Calcium sulfate*-Potassium sulfate
- Ceric oxide*
- Cerous oxalate*
- Cerous sulfate*
- Cesium gallium sulfate*-Ethyl alcohol
- Chloroacetic acid*
- α -Chlorocrotonic acid*
- Chromic acid*
- Citric acid*
- Coumarin*
- Cresol (o-, p-)*
- Crotonic acid*
- Cupric chloride*
- Cupric hydroxide*
- Cupric nitrate*
- Cupric sulfate*
- Cupric sulfate*-Sodium sulfate
- Dimethyl sulfate*
- 2, 5-Dimethylphenol*
- 3, 4-Dimethylphenol*
- Dimethylpyrone*
- Dinitrobenzene*
- Erbium oxalate*
- Erbium sulfate*
- Ethyl alcohol*
- Ethyl alcohol*-Sodium sulfate
- Ethyl ether*
- Ferric oxide*
- Ferric sulfate*
- Ferrous oxide*
- Ferrous sulfate*
- Gadolinium oxalate*
- Gadolinium sulfate*
- Glutaric acid*
- Hydrogen chloride*
- Hydrogen chloride*-Sodium sulfate
- Iodic acid*
- Lanthanum oxalate*
- Lanthanum oxalate*-Lanthanum sulfate
- Lanthanum oxalate*-Lanthanum sulfate-Oxalic acid
- Lanthanum oxalate*-Oxalic acid
- Lanthanum sulfate*
- Lanthanum sulfate*-Oxalic acid
- Lead sulfate*
- Lithium sulfate*
- Magnesium chloride*
- Magnesium nitrate*
- Magnesium sulfate*
- Malic acid*
- Malonic acid*
- Mandelic acid*
- Manganous oxalate*
- Mercuric oxide*
- Mercuric sulfate*
- Mercurous sulfate*
- Mercury*
- Molybdenum trioxide*
- Nitric acid*
- Nitric acid*-Sodium sulfate
- p-Nitrobenzaldehyde*
- Nitrogen trioxide*
- Nitroguanidine*
- Nitrophenol (o-, m-, p-)*
- Oxalic acid*
- Persulfuric acid*
- Phenanthraquinone*
- Phenol*
- Phenol*-Pyridine
- Phenylacetic acid*
- Potassium chloride*
- Potassium dichromate*
- Potassium hydrogen sulfate*
- Potassium nitrate*
- Potassium oxide*
- Potassium pyrosulfate*
- Potassium sulfate*
- Radium sulfate*

Sulfuric acid.—(Continued)

- Samarium oxalate*
- Samarium sulfate*
- Scandium oxalate*
- Scandium sulfate*
- Silver sulfate*
- Sodium chloride*
- Sodium hydroxide*
- Sodium nitrate*
- Sodium pyrosulfate*
- Sodium sulfate*
- Suberic acid*
- Succinic acid*
- Sulfur dioxide*
- Sulfur trioxide*
- Tartaric acid
- Freezing point-solubility in water, **4**: 398
- Thallium trioxide
- Freezing point-solubility in water, **4**: 336, 337, 389
- Thallous sulfate
- Solubility in water, **7**: 322
- Thorium oxalate
- Freezing point-solubility in water, **4**: 335; **7**: 318, 319
- Thorium sulfate
- Freezing point-solubility in water, **4**: 336
- Thymol
- Freezing point-solubility, **4**: 189
- Toluic acid (o-, m-, p-)
- Freezing point-solubility, **4**: 189
- Trichloroacetic acid
- Freezing point-solubility, **4**: 188
- Trichlorolactic acid
- Freezing point-solubility in water, **4**: 398
- Trinitrotoluene
- Freezing point-solubility in water, **4**: 398
- Uranous sulfate
- Density, aqueous solution, **3**: 96
- Uranyl nitrate
- Density, aqueous solution, **3**: 96
- Uranyl sulfate
- Density, aqueous solution, **3**: 96
- Yttrium oxalate
- Freezing point-solubility in water, **4**: 335
- Zinc chloride
- Density, aqueous solution, **3**: 96
- Zinc sulfate
- Density, aqueous solution, **3**: 96
- Freezing point-solubility, **4**: 43
- Zirconium oxide
- Density, **3**: 133
- Zirconium sulfate
- Freezing point-solubility in water, **4**: 336
- Sulfurous acid**
- Absorption spectra, **5**: 327, 330
- Electrical conductivity, aqueous solution, **6**: 241, 242, 260
- Free energy, **7**: 237
- Ionization, **7**: 237
- Ions, **7**: 237
- Freezing point lowering in aqueous solution, **4**: 261
- Heat of formation, **5**: 178
- Ionization constants, **7**: 237
- Solubility in water, **4**: 217
- Sulfuryl bromide**, vapor pressure, **3**: 213
- Sulfuryl chloride**
- Boiling point, **1**: 107, 162; **3**: 328
- Decomposition, kinetics of, **7**: 116
- Density, **1**: 107; **3**: 22
- Dielectric constant, **6**: 76
- Electrical conductivity, **6**: 142
- Free energy, **7**: 237
- Formation, **7**: 237

* Data for system will be found under this compound in Index. Full explanation on page vii.

Sulfuryl ch'loride.—(Continued)

- Heat of formation, **5**: 178
- Heat of vaporization, **5**: 136
- Melting point, **1**: 107
- Photochemical formation, **7**: 164
- Refractive index, **1**: 107, 165
- Specific heat
 - Gas, **5**: 81
 - Liquid, **5**: 106
- Surface tension, **4**: 447
- Chlorine*-Sulfur dioxide
- Diethyl malonate*
- Dimethyl tartrate*
- Sulfur dioxide*
- Trional
 - Boiling point elevation, **3**: 329
- Sulohohalite**
 - Density, **1**: 150
 - Refractive index, **1**: 150, 165
- Sun**
 - Brightness, **5**: 247
 - Characteristics, **1**: 392
 - Motion, **1**: 389
 - Solar system, position in, **1**: 387
- Sun bronze**, **2**: 384; cf. 574, 600
- Sunlight**, spectra of, **5**: 380
- Superbronze**, **2**: 384, 556
- Superior alloy**
 - Electrical conductivity, **6**: 196
- Surface brightness**
 - Conversion factors, **1**: 26
- Surface energy**, **4**: 432
- Surface layers**, properties of, **4**: 475
- Surface resistivity**
 - Conversion factors, **1**: 27
- Surface tension**
 - Age of surface, variation with, **4**: 474
 - Conversion factors, **1**: 25
 - Definition, **1**: 42
 - Elements, **1**: 103
 - Formulas, **4**: 434
 - Gas pressure, effect of, **4**: 475
 - Gelatins, **2**: 225
 - Glass, **2**: 96
 - Measurement, methods of, **4**: 435
 - Petroleum, **2**: 146
 - Soap solutions, **5**: 449
- Susceptibility**
 - Definition, **1**: 42
 - Differential, **6**: 370
 - Magnetic, **6**: 354
- Susini (alloy)**, **2**: 384, 534
- Sutherland's constant**, **5**: 1
- Sutherland's formula** (viscosity), **5**: 1
- Svabite**
 - Density, **1**: 143
 - Refractive index, **1**: 143, 167
- Svanbergite**
 - Density, **1**: 147
 - Refractive index, **1**: 147, 167
- Sweden**, weights and measures, **1**: 12
- Swedenborgite**, refractive index, **7**: 27
- Swedish iron**
 - Kerr constant, **6**: 435
 - Magnetic properties, **6**: 374, 376
- Sweetening agents**, **1**: 357
- Switzerland**, weights and measures, **1**: 12
- Syenite**
 - Bulk density, **2**: 53
 - Compressibility, **3**: 51
 - Compressive strength, **2**: 47
 - Elasticity, **2**: 52
 - Hardness, **2**: 50
 - Impact hardness, **2**: 51
- Syepoorite**
 - Density, **1**: 130
 - See also Cobaltous sulfide.
- Sylvestrene**
 - Absorption spectra, **5**: 346
 - Heat of combustion, **5**: 164
 - Optical rotatory power, **7**: 410

Sylvestrene.—(Continued)

- Refractive index, **7**: 52
- Surface tension, **4**: 460
- Sylveterpine**, optical rotatory power, **7**: 412
- Sylvite**
 - Spectral filter, use as, **5**: 273
 - See also Potassium chloride.
- Symbols**, general list, **1**: 16
- Symplectite**
 - Density, **1**: 129
 - Refractive index, **1**: 129, 172
- Syngenite**
 - Density, **1**: 158
 - Refractive index, **1**: 158, 169; **7**: 28
- Synodical**, definition, **1**: 42
- Syria**, weights and measures, **1**: 12
- Szabelyite**
 - Density, **1**: 142
 - Refractive index, **1**: 142, 167
- Szmikite**
 - Density, **1**: 127
 - Refractive index, **1**: 127, 171
- Szomolnokite**, density, **1**: 128
- T. metal**, **2**: 384; cf. 464, 542
- Tachyhydrite**
 - Density, **1**: 146
 - Refractive index, **1**: 146, 166
- Tagilite**
 - Density, **1**: 122
 - Refractive index, **1**: 122, 173
- Takadiastase**. See Maltase.
- Talc**
 - Compressibility, **3**: 51
 - Density, **1**: 142
 - Refractive index, **1**: 142, 171
 - Specific heat, **5**: 99
 - Thermal conductivity, **5**: 217
 - See also Soapstone.
- Talitol**, optical rotatory power, **7**: 388
- Talmi gold**, **2**: 384; cf. 556
- Tamarugite**
 - Density, **1**: 153
 - Refractive index, **1**: 153, 168
- α -Tanacetoneketocarboxylic acid**
 - Heat of combustion, **5**: 166
- Tandem (alloy)**, **2**: 384, 557
- Tannic acid**
 - Electrical conductivity, aqueous solution, **6**: 300
 - Heat of solution in water, **5**: 150
- Tanning materials**, **2**: 243
- Tannins**
 - Chemical properties, **2**: 240
 - Classification, **2**: 239
 - Diffusion in water, **5**: 71
 - Sources, **2**: 243
 - Synthetic, **2**: 241
- Tantalum**
 - Absorption, index of, **5**: 250
 - Accommodation coefficient, **5**: 53
 - Boiling point, **1**: 102
 - Brightness, **5**: 246
 - Brightness temperature, **5**: 245
 - Color temperature, **5**: 246
 - Compressibility, **3**: 47, 49
 - Density, **2**: 456
 - Elastic properties, **2**: 594
 - Electrical conductivity, **6**: 129, 134
 - Magnetic field, effect of, **6**: 422
 - Electrons, thermal emission of, **6**: 54, 55
 - Emission, spectral, **5**: 254
 - Emission spectra, **5**: 315
 - Hall effect, **6**: 416
 - Magnetic susceptibility, **6**: 356
 - Nernst effect, **6**: 420
 - Persistent lines, **5**: 324
 - Photoelectric work function, **6**: 57
 - Refraction, index of, **5**: 250
 - Specific heat, **5**: 94
 - Tensile properties, **2**: 592

Tantalum.—(Continued)

- Thermal conductivity, **5**: 220, 221
- Thermal expansion, **2**: 462
- Thermionic work function, **6**: 54, 56
- Thermochemistry, **5**: 193
- Thermoelectric properties, **6**: 214
- Thomson coefficient, **6**: 228
- X-ray absorption limits, **6**: 41
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 41
- X-ray series, limiting frequencies, **6**: 35
- Carbon*-Iron
- Carbon monoxide*
- Nickel*
- Silicon*
- Tantalum carbide**, X-ray diffraction data, **1**: 343
- Tantalum chloride**, electrical conductivity, **6**: 148
- Tantalum fluoride**
 - Vapor pressure, **3**: 214
 - Hydrogen fluoride*-Potassium fluoride
- Tantalum lamps**, temperature, **5**: 247
- Tantalum nitride**, decomposition pressure, **7**: 288
- Tantalum pentoxide**
 - Dissociation temperature, **4**: 84
 - Heat of formation, **5**: 193
 - Columbium oxide*
- Tantalum steels**, **2**: 531
- Tantiron**, **2**: 384, 473
- Tar**, wood, thermal conductivity, **5**: 228
- Tar distillates**, physical properties, **2**: 171
- Tar oils**
 - Diesel motors, physical properties, **2**: 159, 160
 - Distillates, physical properties, **2**: 157
 - Physical properties, **2**: 157
- Tar pitches**. See Pitches.
- Taramellite**
 - Density, **1**: 148
 - Refractive index, **1**: 148, 173
- Tarapacaite**
 - Density, **1**: 157
 - Melting point, **1**: 157
 - Refractive index, **1**: 157, 172
 - See also Potassium chromate.
- Taraxasterol**, optical rotatory power, **7**: 464
- Tarbuttite**
 - Density, **1**: 119
 - Refractive index, **1**: 119, 172
- Tarnac (alloy)**, **2**: 384
- Electrical conductivity, **6**: 196
- Tarpon paper**. See Fish paper.
- Tars**
 - Classification, **2**: 170
 - Flash points, **2**: 172
 - Physical properties, **2**: 170
 - Specific heat, **2**: 172
 - Thermal expansion, **2**: 172
 - Viscosity, **2**: 172
- Tartar emetic**
 - Density, **1**: 156
 - Refractive index, **1**: 156, 171
 - Ethyl alcohol*
- Tartaric acid**
 - Absorption spectra, **5**: 337
 - Amides, optical rotatory power, **7**: 381
 - Boiling point elevation in aqueous solution, **3**: 327
 - Bromination, photochemical, **7**: 165, 169
 - Crystallography, **1**: 324
 - Decomposition pressure of hydrate, **7**: 246
 - Density, aqueous solution, **3**: 112, 114; **7**: 68
 - Dielectric constant, **6**: 86
 - Diffusion in water, **5**: 70
 - Diffusion in methyl alcohol, **5**: 72

* Data for system will be found under this compound in Index. Full explanation on page vii.

Tartaric acid.—(*Continued*)

- Electrical conductivity, aqueous solution, **6**: 267
- Freezing point lowering of aqueous solution, **4**: 262
- Heat of combustion, **5**: 165
- Heat of formation, **5**: 181
- Heat of solution in water, **5**: 149
- Optical rotatory power, **7**: 354, 381
- Piezoelectric constant, **6**: 209, 212
- Pyroelectric constant, **6**: 209, 212
- Refractive index, aqueous solution, **7**: 68
- Solubility in water, **4**: 251, 253
- Solution velocity in water, **5**: 59
- Specific heat, **5**: 102
- Aqueous solution, **5**: 124
- Surface tension, aqueous solution, **4**: 468
- Vapor pressure, aqueous solution, **3**: 365
- Vapor pressure lowering in aqueous solution, **3**: 293
- Viscosity, aqueous solution, **5**: 21
- Acetic acid*
- Ammonium heptamolybdate*
- Benzene*
- Boric acid*
- Calcium tartrate*
- Carbon tetrachloride*
- Ethyl alcohol*
- Ethyl ether*
- Glucose*
- Hydrogen chloride*
- Isoamyl alcohol*
- Mercuric chloride*
- Molybdenum trioxide*
- Pyridine*
- Sodium tartrate*
- Sodium tartrate*-Sucrose
- Sulfuric acid*
- d*-Tartaric acid
 - l-Tartatic acid
- Freezing point-solubility, **4**: 115
- Tartaric ditoluide
 - Pyridine*
- Tartronic acid
 - Decomposition, kinetics of, **7**: 122
 - Electrical conductivity, aqueous solution, **6**: 264
 - Heat of combustion, **5**: 165
 - Heat of solution in water, **5**: 148
- Taurine, heat of combustion, **5**: 169
- Tautomerism, kinetics of, **7**: 119
- Taxicatin, optical rotatory power, **7**: 392
- Taylor iron, magnetic properties, **6**: 376
- Taylor white (alloy), **2**: 384
- Taylorite, refractive index, **1**: 155, 168
- Teak wood
 - Density, **2**: 314
 - Thermal conductivity, **2**: 314
- Teallite, density, **1**: 117
- Tegit
 - Dielectric strength, **2**: 310
 - Electrical conductivity, **2**: 310
 - Strength properties, **2**: 311
- Telegraph bronze, **2**: 385, 561
- Telephone receivers, **6**: 455
- Telluric acid
 - Electrical conductivity, aqueous solution, **6**: 260
 - Freezing point lowering of aqueous solution, **4**: 255
 - Heat of formation, **5**: 178
 - Ionization constants, **7**: 238
 - Magnetic susceptibility, **6**: 356
 - Solubility in water, **4**: 217
- Tellurine. *See* Diatomaceous earth.
- Tellurite
 - Density, **1**: 107
 - Refractive index, **1**: 107, 174
- See also* Tellurium dioxide.

Tellurium

- Absorption, index of, **5**: 250
- Band spectra, **5**: 416
- Boiling point, **1**: 102
- Compressibility, **3**: 49
- Density, **1**: 105; **3**: 22
- Electrical conductivity, **1**: 105; **6**: 141
 - Low temperature, **6**: 129, 134
 - Magnetic field, effect of, **6**: 422
- Electrode potential, **7**: 238
- Emission, spectral, **5**: 254, 257
- Emission spectra, **5**: 315
- Ettingshausen effect, **6**: 420
- Hall effect, **6**: 416, 418
- Heat of dissociation, **5**: 418
- Heat of fusion, **1**: 105; **5**: 131
- Heat of transformation, **2**: 458
- Heat of vaporization, **1**: 102
- Isotopes, **1**: 47
- Magnetic susceptibility, **6**: 356
- Magneton number, **6**: 346
- Melting point, **1**: 105
- Nernst effect, **6**: 420
- Persistent lines, **5**: 324
- Quantum numbers, **5**: 408
- Refractive index, **5**: 250; **7**: 19
 - Gas, **7**: 8
- Righi-Leduc effect, **6**: 421
- Specific heat, **1**: 105; **5**: 94
- Spectral series, **5**: 405
- Thermal conductivity, **5**: 220
 - Crystals, **5**: 231
 - Magnetic field, effect of, **6**: 424
- Thermal expansion, **1**: 105; **3**: 22
- Thermochemistry, **5**: 178
- Thermoelectric properties, **6**: 214
- Vapor pressure, **3**: 202
- X-ray absorption limits, **6**: 38, 45
- X-ray crystal structure, **1**: 341
- X-ray emission spectra, **6**: 38
- X-ray series, limiting frequencies, **6**: 35
- Aluminum*
- Antimony*
- Arsenic*
- Bismuth*
- Bismuth*-Sulfur
- Bromine*
- Cadmium*
- Chlorine*
- Copper*
- Gold*
- Iodine*
- Lead*
- Mercury*
- Nickel*
- Selenium*
- Selenium*-Sulfur
- Silver*
- Sodium*
- Sulfur*
- Thallium
 - Freezing point-solubility, **4**: 28
- Tin
 - Electrical conductivity, **6**: 195
 - Freezing point-solubility, **4**: 28
 - Magnetic susceptibility, **6**: 365
 - Specific heat, **5**: 121
 - Thermoelectric properties, **6**: 221
- Zinc
 - Equilibrium diagram, **2**: 441
 - Freezing point-solubility, **4**: 28
- Tellurium dichloride
 - Electrical conductivity, **6**: 147
 - Ethyl ether*
- Tellurium dioxide
 - Heat of formation, **5**: 178
 - Magnetic susceptibility, **6**: 356
 - Reaction with hydrogen ion, **7**: 238
 - Solubility in hydrochloric acid, **7**: 238
 - Sublimation temperature, **1**: 107, 162

Tellurium dioxide.—(*Continued*)

- See also* Tellurite.
- Hydrogen chloride*
- Tellurium hexafluoride, refractivity, **7**: 8
- Tellurium sulfite, heat of formation, **5**: 178
- Tellurium tetrabromide
 - Heat of formation, **5**: 178
- Tellurium tetrachloride
 - Electrical conductivity, **6**: 147
 - Heat of formation, **5**: 178
- Tellurium trioxide
 - Heat of formation, **5**: 178
- Tellurous acid
 - Density, aqueous solution, **3**: 55
 - Free energy of formation, **7**: 238
 - Ionization constants, **7**: 238
 - Magnetic susceptibility, **6**: 356
 - Reaction with hydrogen ion, **7**: 238
- Temperature
 - Body effects, **2**: 325
 - Brightness, **1**: 59; **5**: 245
 - Brightness versus true, **1**: 60
 - Color, **5**: 246
 - Constant, laboratory methods for, **1**: 61
 - Conversion factors, **1**: 21, 52
 - Fixed points for measuring, **1**: 53
 - Inversion, **5**: 146
 - Low, maintaining, **1**: 61
 - Maximum, production of, **1**: 67
 - Radiation, total, **5**: 246
 - Stellar, **1**: 385
 - Thermodynamic scale, **1**: 52
 - Thermometric scales, **1**: 52
 - Virtual, **1**: 71
- Temperature scales
 - Fixed points for, **1**: 53
 - Leiden, **1**: 54
- Tempering, volume change on, **2**: 477
- Tenax metal, **2**: 385; *cf.* 546
- Tennantite
 - Density, **1**: 123
 - Refractive index, **1**: 123, 166
- Tenorite
 - Density, **1**: 121
 - Refractive index, **1**: 121, 174
- See also* Cupric oxide.
- Tensile energy, **4**: 434
- Tensile strength
 - Definition, **2**: viii
 - Fibers, textile, **2**: 231
 - Glass, **2**: 93
 - Liquids, **4**: 434
 - Metals, **2**: 358
 - Silica, **4**: 22
 - Woods, **2**: 1
- Tensilite (alloy), **2**: 385; *cf.* 556
- Tension, conversion factors, **1**: 24
- Tephroite
 - Density, **1**: 128
 - Melting point, **1**: 128
 - Refractive index, **1**: 128, 173
- See also* Manganese orthosilicate.
- Tetraconic acid
 - Electrical conductivity, aqueous solution, **6**: 282
 - Heat of combustion, **5**: 165
- Terbium
 - Cathodoluminescence, **5**: 388
 - Emission spectra, **5**: 315
 - Persistent lines, **5**: 324
 - X-ray absorption limits, **6**: 40
 - X-ray emission spectra, **6**: 40
 - X-ray series, limiting frequencies, **6**: 35
- Terbium bromate, solubility in water, **4**: 228
- Terebene, surface tension, **4**: 460
- Terebenthene, specific heat, gas, **5**: 81
- Terebic acid
 - Electrical conductivity, aqueous solution, **6**: 282
 - Heat of combustion, **5**: 166

Terecamphene, heat of combustion, **5**: 164

Terephthalic acid

Absorption spectra, **5**: 342

Heat of combustion, **5**: 165

Tersantalol, optical rotatory power, **7**: 434

Terlinguaite

Density, **1**: 121

Refractive index, **1**: 121, 174

Terne metal, **2**: 385

Terpene, magnetic susceptibility, **6**: 364

Terpine hydrate

Heat of combustion, **5**: 164

Refractive index, **7**: 30

-*Methyl alcohol**

Terpine hydrochloride

-*Benzene**

Terpinene

Absorption spectra, **5**: 346

Dielectric constant, **6**: 95

Electrical conductivity, **6**: 144

Heat of combustion, **5**: 164

δ-1, 5-Terpinene, azeotropic mixtures, **3**: 322

Terpineol

Absorption spectra, **5**: 333

Dielectric constant, **6**: 95

Electrical conductivity, **6**: 144

Heat of combustion, **5**: 164

Magnetic susceptibility, **6**: 363

Terra cotta bodies, **2**: 66

Terrestrial data, **1**: 392, 393

Terrestrial magnetism, **6**: 445

Tetmajer aluminium bronze, **2**: 385

Tetraamylammonium iodide

-*Acetone**

-*Dichloromethane**

-*Methyl acetate**

Tetrabromoacetylene, cryoscopic constant, **4**: 183

1, 1, 1, 2-Tetrabromoethane

Refractive index, **7**: 34

1, 1, 2, 2-Tetrabromoethane

Birefringence, electric, **7**: 110

Density, **3**: 28

Dielectric constant, **6**: 84

Diffusion in organic liquids, **5**: 75

Magnetic susceptibility, **6**: 361

Refractive index, **7**: 34

Surface tension, **4**: 436, 448

-*Acetone**

-*Benzene**

-*Nitrogen tetroxide**

-*Tetrachloroethane*

Density, **3**: 153

-*Vinyl tribromide*

Density, **3**: 153

Tetrabromoethylene, magnetic susceptibility, **6**: 361

Tetrabromophenolphthalein

Absorption spectra, **5**: 353

-*Acetone**

Tetrabutyltin, magnetic susceptibility, **6**: 356

Tetrachloroacetylene, heat of wetting by, **5**: 142

Tetrachlorobenzene, diffusion in methyl alcohol, **5**: 72

3, 4, 3', 4'-Tetrachlorobenzophenone

Surface tension, **4**: 461

2, 4, 2', 4'-Tetrachlorobenzophenone dichloride, surface tension, **4**: 461

1, 1, 2, 2-Tetrachloro-1, 2-diphenylethane

Transition temperature, **4**: 8

1, 1, 1, 2-Tetrachloroethane

Boiling point, **3**: 216

Refractive index, **7**: 34

Vapor pressure, **3**: 216

1, 1, 2, 2-Tetrachloroethane

Absorption spectra, **5**: 331, 335

Azeotropic mixtures, **3**: 319

1, 1, 2, 2-Tetrachloroethane.—(Continued)

Birefringence, **7**: 110

Boiling point, **3**: 216

Density, **3**: 28

Dielectric constant, **6**: 84

Heat of vaporization, **5**: 136

Magnetic susceptibility, **6**: 361

Specific heat, **5**: 107

Surface tension, **4**: 448

Vapor pressure, **3**: 216

Viscosity, **5**: 31; **7**: 213

-*Acetone**

-*Acetophenone**

-*Anthracene**

-*Anthraquinone**

-*Antimony trichloride**

-*Bromine**

-*Carbazole**

-*Carbon tetrachloride**

-*Diethyl tartrate**

-*Ethyl ether**

-*Iodine**

-*Isobutyl diacetyl-d-tartrate**

-*Isobutyl tartrate**

-*Methyl l-α-acetoxypropionate**

-*Methyl lactate**

-*Methyl l-α-methoxypropionate**

-*Naphthalene**

-*Nitrobenzene**

-*Phenanthrene**

-*Phenetole**

-*Phenol**

-*Sulfur**

-*Tetrabromoethane**

Tetrachloroethylene

Absorption spectra, **5**: 331, 335

Azeotropic mixtures, **3**: 319

Birefringence, electric, **7**: 110

Boiling point, **3**: 216

Compressibility, **3**: 35

Density, **3**: 28

Dielectric constant, **6**: 83

Heat of vaporization, **5**: 136

Magnetic susceptibility, **6**: 361

Specific heat

Liquid, **5**: 107

Solid, **5**: 101

Surface tension, **4**: 436, 448

Thermal conductivity, **5**: 228

Vapor pressure, **3**: 216

Viscosity, **5**: 31; **7**: 213

-*Acetone**

-*Acetophenone**

-*Carbon tetrachloride**

-*Iodine**

-*Phenol**

-*Sulfur**

Tetrachlorohydroquinol

Heat of combustion, **5**: 169

Tetrachloroquinone

Absorption spectra, **5**: 338

Heat of combustion, **5**: 169

Tetrachloroxylene (*o*-, *p*-)

Heat of fusion, **5**: 133

Tetracosanic acid

-*Lignoceric acid**

Tetradecane

Compressibility, **3**: 37

Density, **3**: 30

Specific heat, **5**: 113

Viscosity, **7**: 221

Tetradecyl alcohol

"Surface vapor pressure," **4**: 476

Tetradecylene, specific heat, **5**: 113

Tetradymite

Density, **1**: 111

Thermal conductivity, **5**: 231

Tetraethoxy orthosilicate

Heat of formation, **5**: 182

Tetraethoxysilicane

Dielectric constant, **6**: 94

Electrical conductivity, **6**: 142

Heat of vaporization, **5**: 136

Magnetic susceptibility, **6**: 357

Tetraethyl α-amylene-1, 1, 3, 3-tetra-

carboxylate, dielectric constant, **6**: 96

Tetraethyl cyclopropane-1, 1, 2, 2-tetra-

carboxylate, surface tension, **4**: 462

Tetraethyl ferrocyanide, freezing point

lowering of aqueous solution, **4**: 261

Tetraethyl hexane-1-phenyl-2, 2, 4, 4-

tetracarboxylate

Dielectric constant, **6**: 97

Tetraethyl pentane-1, 5-diphenyl-2, 2, 4, 4-

tetracarboxylate

Dielectric constant, **6**: 97

Tetraethyl pentane-1, 1, 3, 3-tetracar-

boxylate, dielectric constant, **6**: 96

Tetraethyl pentane-2, 2, 4, 4-tetracarboxy-

late, dielectric constant, **6**: 96

Tetraethyl propane-1, 1, 3, 3-tetracarboxy-

late, dielectric constant, **6**: 96

Tetraethyl propane-1, 2, 2, 3-tetracarboxy-

late, dielectric constant, **6**: 96

Tetraethyl propylene-1, 1, 3, 3-tetracar-

boxylate, dielectric constant, **6**: 96

Tetraethylammonium bromide

Boiling point elevation in aqueous solu-

tion, **3**: 327

Viscosity, aqueous solution, **5**: 13

-*Acetic acid**

-*Chloroform**

-*1, 1-Dichloroethane**

-*Dichloromethane**

-*Ethyl alcohol**

-*Isoamyl alcohol**

Tetraethylammonium chloride

Boiling point elevation in aqueous solu-

tion, **3**: 327

Density, aqueous solution, **3**: 62, 112, 114

Electrical conductivity, aqueous solu-

tion, **6**: 231, 232

Surface tension, aqueous solution, **4**: 470

Viscosity, aqueous solution, **5**: 13

-*Chloroform**

-*Dichloromethane**

-*Ethyl alcohol**

-*Isoamyl alcohol**

Tetraethylammonium iodide

Boiling point elevation in aqueous solu-

tion, **3**: 327

Electrical conductivity, aqueous solu-

tion, **6**: 235

Solubility in water, **4**: 219

-*Acetone**

-*Acetonitrile**

-*Acetophenone**

-*Acetylacetone**

-*Amyl alcohol**

-*Benzonitrile**

-*Benzyl cyanide**

-*Bromobenzene**

-*Dimethyl malonate**

-*Dimethylnitrosoamine**

-*Epichlorohydrin**

-*Ethyl alcohol**

-*Ethyl alcohol**-*Formamide*

-*Ethyl benzoylacetate**

-*Ethyl cyanoacetate**

-*Ethyl thiocyanate**

-*Ethyl nitrite**

-*Formamide**

-*Furfural**

-*Glycol**

-*Isoamyl alcohol**

-*Methyl alcohol**

-*Methyl cyanoacetate**

-*Methyl formate**

-*Methyl thiocyanate**

-*Nitrobenzene**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Tetraethylammonium iodide.—(Continued)

- Nitromethane*
- Paraldehyde*
- Propionitrile*
- Pyridine*
- Sulfur dioxide*

Tetraethylammonium naphthalene- β -sulfonate

- Dielectric constant, aqueous solution, **6**: 101

Tetraethylammonium nitrate

- Chloroform*
- Dichloromethane*

Tetraethylammonium picrate, electrical conductivity, aqueous solution, **6**: 243**Tetraethylgermanium**

- Boiling point, **1**: 114, 163
- Density, **1**: 114
- Melting point, **1**: 114
- Refractive index, **1**: 114, 165

Tetraethyllead

- Boiling point, **1**: 116, 163
- Density, **1**: 116
- Refractive index, **1**: 116, 165

Tetraethylmethane, surface tension, **4**: 459**Tetraethylphenylenediamine** (*o*-, *m*-, *p*-)

- Quinoline*

Tetraethylsilicon

- Boiling point, **1**: 113, 163
- Density, **1**: 113
- Refractive index, **1**: 113, 173

Tetraethylsuccinic acid

- Electrical conductivity, aqueous solution, **6**: 300
- Heat of combustion, **5**: 166

Tetraethylsuccinic anhydride

- Heat of combustion, **5**: 166

Tetraethyltin

- Boiling point, **1**: 114, 163
- Density, **1**: 114
- Magnetic susceptibility, **6**: 356
- Refractive index, **1**: 114, 165; **7**: 62

Tetrahedrite

- Thermal expansion, **3**: 44

Tetrahydrobenzene

- Refractive index, **7**: 39
- Antimony tribromide*
- Antimony trichloride*

Tetrahydrobenzoic acids

- Electrical conductivity, aqueous solution, **6**: 282
- Heat of combustion, **5**: 165

Tetrahydronaphthalene

- Boiling point, **3**: 347
- Heat of combustion, **5**: 163
- Specific heat, **5**: 112
- Vapor pressure, **3**: 226
- Viscosity, **5**: 38, 41; **7**: 220

See also Tetralin.

- Acetone*
- Anthracene*
- Benzene*
- Butyl alcohol*
- Carbon tetrachloride*
- Chloroform*
- 1, 1-Dichloroethane*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl ether*
- Hexane*
- Methyl alcohol*
- Trichloroethylene

Vapor pressure, **3**: 287

1, 2, 3, 4-Tetrahydronaphthalenediols

- Heat of combustion, **5**: 164

cis-Tetrahydronaphthalene-1, 2-diol

- Boric acid*

Tetrahydronaphthoic acids

- Electrical conductivity, aqueous solutions, **6**: 297
- Optical rotatory power, **7**: 406

Tetrahydro- β -naphthol

- Absorption spectra, **5**: 346

- Acetone*

- Ethyl alcohol*

ac-Tetrahydro-2-naphthol derivatives

- Optical rotatory power, **7**: 405

Tetrahydronaphthylamine

- Optical rotatory power, **7**: 406
- Refractive index, **7**: 51
- Verdet constant, **6**: 430
- Viscosity, **7**: 220

Tetrahydrophthalic acids, electrical conductivity, aqueous solution, **6**: 286, 287**Tetrahydroquinoline**

- Heat of combustion, **5**: 168
- Optical rotatory power, **7**: 407

Tetrahydroquinoline

- Birefringence, magnetic, **7**: 111
- Magnetic susceptibility, **6**: 363
- Refractive index, **7**: 47
- Verdet constant, **6**: 430
- Viscosity, **7**: 220

Tetrahydropyrrole, viscosity, **7**: 215**Tetrahydroterephthalic acids**

- Heat of combustion, **5**: 165

Tetrahydro- α -thiophenecarboxylic acid

- Heat of combustion, **5**: 169

Tetraiodoethylene

- Magnetic susceptibility, **6**: 361

Tetraiodopyrrole

- Magnetic susceptibility, **6**: 361

Tetraisoamylammonium iodide

- Surface tension, **4**: 462
- Chloroform*

Tetralin

- Flash point, **2**: 161
- See also Tetrahydronaphthalene.

- Acetic acid*

- 1, 4-Dichloronaphthalene*

- Iodine*

- Mercuric chloride*

- α -Naphthylamine*

- Picric acid*

Tetramethoxysilicon

- Boiling point, **1**: 113, 163
- Density, **1**: 113
- Dielectric constant, **6**: 88
- Electrical conductivity, **6**: 142
- Refractive index, **1**: 113, 165
- Heat of vaporization, **5**: 136

Tetramethyl glucose, electrical conductivity, aqueous solution, **6**: 297**Tetramethylammonium acetate**

- Density, aqueous solution, **3**: 62

Tetramethylammonium bromide

- Electrical conductivity, aqueous solution, **6**: 231, 234
- Sulfur dioxide*

Tetramethylammonium chloride

- Density, aqueous solution, **3**: 62, 114
- Specific heat, aqueous solution, **5**: 125
- Surface tension, aqueous solution, **4**: 468
- Vapor pressure, **3**: 209; **7**: 246
- Vapor pressure lowering in aqueous solution, **3**: 293

- Viscosity, aqueous solution, **5**: 13

- Formamide*

- Sulfur dioxide*

 α -Tetramethylammonium ferrocyanide

- Osmotic pressure, **4**: 431

Tetramethylammonium hydroxide

- Density, aqueous solution, **3**: 114
- Electrical conductivity, aqueous solution, **6**: 268
- Viscosity, aqueous solution, **5**: 13, 20

Tetramethylammonium iodide

- Electrical conductivity, aqueous solution, **6**: 235
- Solubility in water, **4**: 219
- Vapor pressure, **3**: 209; **7**: 246
- Viscosity, aqueous solution, **5**: 13

Tetramethylammonium iodide.—(Continued)

- Ammonia*
- Ammonium hydroxide*
- Ethyl alcohol*
- Glycol*
- Iodine*
- Iodine*-Nitrobenzene
- Methyl alcohol*
- Nitromethane*
- Potassium hydroxide*
- Salicylaldehyde*
- Sulfur dioxide*

Tetramethylammonium nitrate

- Density, aqueous solution, **3**: 62

Tetramethylammonium perchlorate

- Transition temperature, **4**: 8

Tetramethylammonium sulfate

- Specific heat, aqueous solution, **5**: 125

Tetramethylammonium trichloroacetate

- Specific heat, aqueous solution, **5**: 125

Tetramethylarsonium hydroxide

- Electrical conductivity, aqueous solution, **6**: 268

1, 2, 4, 5-Tetramethylbenzene

- Crystallography, **1**: 330
- Heat of combustion, **5**: 163
- Surface tension, **4**: 460

Tetramethylbenzoic acids, electrical conductivity, aqueous solution, **6**: 298**Tetramethylbutenediol**

- Heat of combustion, **5**: 164

Tetramethylbutindiol

- Heat of combustion, **5**: 164

Tetramethyldiaminobenzhydrol

- Benzene*

Tetramethyldiaminobenzophenone

- Dimethylaniline*

Tetramethyldiaminodiphenylmethane

- Heat of solution in water, **5**: 150

Tetramethylenecarboxylic acid

- Heat of combustion, **5**: 165

Tetramethylenedicarboxylic acids

- Electrical conductivity, aqueous solution, **6**: 274
- Heat of combustion, **5**: 165

Tetramethylglucose, optical rotatory power, **7**: 390**Tetramethylketotetrahydrofurfurane**

- Magnetic susceptibility, **6**: 363

Tetramethyllead

- Boiling point, **1**: 116, 163
- Density, **1**: 116
- Melting point, **1**: 116
- Refractive index, **1**: 116, 165

Tetramethylmethane, heat of combustion, **5**: 163**Tetramethylphosphonium acetate**

- Density, aqueous solution, **3**: 63

Tetramethylphosphonium chloride

- Density, aqueous solution, **3**: 63

Tetramethylphosphonium hydroxide

- Electrical conductivity, aqueous solution, **6**: 268

Tetramethylphosphonium nitrate

- Density, aqueous solution, **3**: 63

Tetramethylstibonium hydroxide

- Electrical conductivity, aqueous solution, **6**: 268

Tetramethylsuccinic acid

- Electrical conductivity, aqueous solution, **6**: 288
- Heat of combustion, **5**: 165

- Ethyl ether*

Tetramethylsuccinic anhydride

- Heat of combustion, **5**: 166

Tetramethyltin

- Boiling point, **1**: 114, 163
- Density, **1**: 114
- Magnetic susceptibility, **6**: 356
- Refractive index, **1**: 114, 165

Tetramethyluric acid

Crystallography, **1**: 329
Refractive index, **7**: 30

Tetranitroaniline

Crystallography, **1**: 325
Explosives, properties as, **7**: 490
-Glycol diacetate*

Tetranitroanisole

Explosive, properties as, **7**: 490

Tetranitromethane

Absorption spectra, **5**: 334
Birefringence, **7**: 110
Boiling point, **3**: 215
Dielectric constant, **6**: 83
Magnetic susceptibility, **6**: 361
Refractive index, **7**: 34
Vapor pressure, **3**: 215

Tetraphenylcacodyl

-Benzene*

Tetraphenyldiarsine, electrical conductivity, **6**: 146**Tetraphenylethane**

Absorption spectra, **5**: 355
-Nitrobenzene*

Tetraphenylethylene

-Silicon tetraphenyl*

Tetraphenylmethane, heat of combustion, **5**: 164**Tetraphenyltin**

Density, **3**: 44
-Lead tetraphenyl*
-Mercury tetraphenyl*
-Silicon tetraphenyl*
-Triphenylstibine
Freezing point-solubility, **4**: 198

Tetrapropoxysilicon

Boiling point, **1**: 113, 163
Density, **1**: 113
Refractive index, **1**: 113, 173

Tetrapropylammonium bromide

-Chloroform*

Tetrapropylammonium chloride

Density, **3**: 45
Aqueous solution, **3**: 62
Surface tension, aqueous solution, **4**: 470
Viscosity, aqueous solution, **5**: 13
-Chloroform*

Tetrapropylammonium iodide

Absorption spectra, **5**: 349
Boiling point elevation in aqueous solution, **3**: 328
Electrical conductivity, aqueous solution, **6**: 231, 235
Viscosity, aqueous solution, **5**: 13

-Acetone*

-Acetonitrile*

-Anisaldehyde*

-Anthracene*-Chloroform

-Benzaldehyde*

-Benzonitrile*

-Chloroform*

-Chloroform*-Diethylammonium chloride

-1, 1-Dichloroethane*

-Dichloromethane*

-Dimethyl malonate*

-Ethyl acetate*

-Ethyl alcohol*

-Ethyl bromide*

-Ethyl nitrite*

-Isoamyl alcohol*

-Methyl alcohol*

-Nitrobenzene*

-Nitromethane*

-Propionitrile*

Tetrapropylammonium nitrate

Boiling point elevation in aqueous solution, **3**: 328
-Acetone*
-Acetonitrile*
-Chloroform*
-Dichloromethane*

Tetrapropylammonium nitrate.—(Continued)

-Ethyl alcohol*

-Isoamyl alcohol*

Tetrapropylammonium picrate

-Chloroform*

-Methyl acetate*

Tetrathionic acid

Electrical conductivity, aqueous solution, **6**: 242

Heat of formation, **5**: 178

Tetrazole, electrical conductivity, aqueous solution, **6**: 261**Tetrolic acetal**

Magnetic susceptibility, **6**: 363

Tetrolic acid

Electrical conductivity, aqueous solution, **6**: 265

Heat of combustion, **5**: 165

Tetryl

Detonation velocity, **7**: 493
Explosive, properties as, **7**: 490
Heat of combustion, **5**: 168
Heat of explosion, **7**: 490
Solubility in water, **4**: 252
Specific heat, **5**: 104

-Carbon disulfide*

-Carbon tetrachloride*

-Chloroform*

-Ethyl alcohol*

-Ethyl ether*

-Glycol diacetate*

-Nitroaniline (*m*-, *p*-)*

-*p*-Nitrotoluene*

-Picric acid*

-1, 3, 5-Trinitrobenzene

Freezing point-solubility, **4**: 175

-2, 4, 6-Trinitrotoluene

Freezing point-solubility, **4**: 146

Textile fibers, **2**: 231

Electrical properties, **2**: 310

Hygroscopicity, **2**: 323

Insulating properties, **2**: 312

Thermal radiations from, **5**: 244

Thalenite

Density, **1**: 138

Refractive index, **1**: 138, 172

Thallic bromide, heat of formation, **5**: 184**Thallic chloride**, heat of formation, **5**: 184**Thallic chlorodibromide**

Heat of formation, **5**: 184

Thallic hydroxide, heat of formation, **5**: 184**Thallic oxide**

X-ray diffraction data, **1**: 342

Thallic sulfate

Ammine

Decomposition pressure, **7**: 252

Heat of decomposition, **7**: 252

Thallium

Activity in amalgams, **7**: 251

Boiling point, **1**: 102; **3**: 205

Cathodoluminescence, **5**: 390

Compressibility, **3**: 47, 49

Critical potentials, **6**: 72

Density

Gas, **1**: 102

Liquid, **1**: 102; **2**: 463

Solid, **1**: 105; **2**: 456

Electrical conductivity

Liquid, **1**: 103

Solid, **1**: 105; **6**: 136, 137, 140

Low temperature, **6**: 129, 134

Electrode potential, **6**: 320; **7**: 251

Emission spectra, **5**: 317

Entropy, **5**: 89

Fluorescence of vapors, **5**: 391

Free energy

Allotropic forms, **7**: 251

Amalgamation, **7**: 251

Fusion, **7**: 251

Hall effect, **6**: 416

Thallium.—(Continued)

Heat content, **5**: 89

Heat of fusion, **1**: 105; **2**: 458; **7**: 251

Heat of transition, **5**: 184

Heat of vaporization, **1**: 102

Magnetic susceptibility, **6**: 356

Magneton number, **6**: 346

Melting point, **1**: 105

Nernst effect, **6**: 420

Persistent lines, **5**: 324

Quantum numbers, **5**: 408

Specific heat, **1**: 105; **5**: 86, 89, 94

Spectral series, **5**: 405

Thermal conductivity, **5**: 220, 221

Thermal expansion

Liquid, **1**: 102; **2**: 463

Solid, **1**: 106; **2**: 462

Thermochemistry, **5**: 184

Thermodynamic potential, **5**: 89

Thermoelectric properties, **6**: 214, 225

Vapor pressure, **3**: 205

Volume change on fusion, **2**: 474

X-ray absorption limits, **6**: 42

X-ray crystal structure, **1**: 341

X-ray emission spectra, **6**: 42

X-ray series, limiting frequencies, **6**: 35

Zeeman effect, **5**: 420

-Antimony*

-Arsenic*

-Bismuth*

-Cadmium*

-Calcium*

-Copper*

-Gold*

-Indium*

-Lead*

-Magnesium*

-Manganese*

-Mercury*

-Nickel*

-Platinum*

-Potassium*

-Selenium*

-Silver*

-Sodium*

-Sulfur*

-Tellurium*

-Tin

Electrical conductivity, **6**: 196

Equilibrium diagram, **2**: 416

Thermal conductivity, **5**: 226

Thermal expansion, **2**: 474

-Zinc

Equilibrium diagram, **2**: 441

Thallium acetate

Density, aqueous solution, **3**: 64

Heat of formation, **5**: 184

-Thallous nitrate

Density, **3**: 134

Thallium amalgams

Partial vapor pressure, **3**: 284

Specific heat, **7**: 251

-Mercurous chloride*

-Silver chloride*

Thallium bromate

Electrical conductivity, aqueous solution, **6**: 243, 257

Solubility in water, **4**: 220; **6**: 257

Thiocyanate ion, reaction with, **7**: 252

-Thallium monochloride

Solubility in water, **7**: 319, 322

-Thallium thiocyanate

Solubility in water, **7**: 322

Thallium carbonate

Electrical conductivity, aqueous solution, **6**: 244

Solubility in water, **4**: 221

Thallium chlorate

Density, aqueous solution, **3**: 64

Electrical conductivity, aqueous solution, **6**: 243

* Data for system will be found under this compound in Index. Full explanation on page vii.

Thallium chlorate.—(Continued)

Solubility in water, 4: 220

Sulfate ion, reaction with, 7: 252

-Potassium chlorate*

-Thallium monochloride

Solubility in water, 7: 319

-Thallous sulfate

Freezing point-solubility in water, 4: 313; 7: 321, 322

Thallium cyanate, heat of formation, 5: 184**Thallium cyanide**

-Potassium cyanide*

Thallium dihydrogen arsenate, electrical conductivity, aqueous solution, 6: 244**Thallium dihydrogen phosphate**, electrical conductivity, aqueous solution, 6: 244**Thallium dithionate**, electrical conductivity, aqueous solution, 6: 243]**Thallium ethylate**

Heat of formation, 5: 184

Heat of fusion, 5: 131

Thallium hydrogen arsenate,⁷electrical conductivity, aqueous solution, 6: 244**Thallium hydrogen oxalate**

Crystallography, 1: 320

Freezing point lowering of aqueous solution, 4: 255

Thallium hydrogen sulfate

Electrical conductivity, aqueous solution, 6: 244

Freezing point lowering of aqueous solution, 4: 255

Thallium hydrogen tartrate, electrical conductivity, aqueous solution, 6: 241, 244**Thallium iodate**

Electrical conductivity, 6: 243

Aqueous solution, 6: 257

Solubility in water, 6: 257

Thallium malate

-Hydrogen chloride*

Thallium monobromide

Ammine

Decomposition pressure, 7: 252

Heat of decomposition, 7: 252

Heat of formation, 5: 184

Compressibility, 3: 50

Dielectric constant, 6: 76

Electrical conductivity, 6: 148

Aqueous solution, 6: 257

Free energy, 7: 252

Ionization, 7: 252

Heat of formation, 5: 184

Heat of fusion, 5: 131

Photoconductivity, 6: 66

Residual rays, 5: 261

Solubility in water, 4: 220; 6: 257

Solution velocity in water, 5: 56

Specific heat

Liquid, 5: 106

Solid, 5: 96

Thermal conductivity, 5: 217, 231

Vapor pressure, 3: 214

X-ray diffraction data, 1: 342

-Aluminum bromide*

-Mercuric bromide*

-Stannous chloride*

-Thallium monochloride

Freezing point-solubility, 4: 53

-Thallium moniodide

Freezing point-solubility, 4: 54

-Thallous nitrate

Solubility in water, 7: 322

Thallium monochloride

Ammines

Decomposition pressure, 7: 251

Heat of decomposition, 7: 251

Heat of formation, 5: 184

Boiling point elevation in aqueous solution, 3: 325

Bromate ion, reaction with, 7: 252

Bromide ion, reaction with, 7: 252

Thallium monochloride.—(Continued)

Compressibility, 3: 50

Density, aqueous solution, 3: 104

Dielectric constant, 6: 76

Electrical conductivity, 6: 148

Aqueous solution, 6: 231, 232, 257

Entropy, 5: 90

Free energy, 7: 251

Ionization, 7: 251

Freezing point lowering of aqueous solution, 4: 255

Heat content, 5: 90

Heat of formation, 5: 184

Heat of fusion, 5: 131

Ionization constant, 7: 251

Magnetic susceptibility, 6: 357

Photoconductivity, 6: 66

Residual rays, 5: 261

Solubility in water, 4: 220; 6: 257

Solution velocity in water, 5: 56

Specific heat

Liquid, 5: 106

Solid, 5: 90, 96

Thermal conductivity, 5: 217, 231

Thermodynamic potential, 5: 90

Thiocyanate ion, reaction with, 7: 252

Transference number, 6: 309

Vapor pressure, 3: 214

Aqueous solution, 3: 366

X-ray diffraction data, 1: 342

-Acetic acid*

-Aluminum chloride*

-Ammonium chloride*

-Ammonium nitrate*

-Antimony trichloride*

-Barium chloride*

-Beryllium chloride*

-Bismuth chloride*

-Cadmium chloride*

-Cadmium sulfate*

-Calcium chloride*

-Cesium chloride*

-Cupric chloride*

-Cuprous chloride*

-Ferric chloride*

-Hydrogen chloride*

-Iron*

-Lanthanum nitrate*

-Lanthanum sulfate*

-Lead chloride*

-Lithium chloride*

-Lithium nitrate*

-Magnesium chloride*

-Magnesium sulfate*

-Manganous chloride*

-Mercuric chloride*

-Nitric acid*

-Potassium chlorate*

-Potassium chloride*

-Potassium nitrate*

-Potassium sulfate*

-Rubidium chloride*

-Silver chloride*

-Sodium acetate*

-Sodium chlorate*

-Sodium chloride*

-Sodium nitrate*

-Strontium chloride*

-Thallium bromate*

-Thallium chlorate*

-Thallium monobromide*

-Thallium moniodide

Freezing point-solubility, 4: 53

-Thallous nitrate

Solubility in water, 7: 319

-Thallous thiocyanate

Solubility in water, 7: 320, 322

-Thallous sulfate

Freezing point-solubility in water, 4: 278; 7: 319

Thallium monochloride.—(Continued)

-Zinc chloride

Freezing point-solubility, 4: 53

Solubility in water, 7: 320

-Zinc sulfate

Solubility in water, 7: 320

Thallium monofluoride

Density, aqueous solution, 3: 64

Electrical conductivity, aqueous solution, 6: 231, 232

Heat of formation, 5: 184

Specific heat, aqueous solution, 5: 122

Vapor pressure, 3: 214

Thallium moniodide

Ammine

Decomposition pressure, 7: 252

Heat of decomposition, 7: 252

Heat of formation, 5: 184

Compressibility, 3: 50

Electrical conductivity, 6: 148

Aqueous solution, 6: 257

Free energy, 7: 252

Ionization, 7: 252

Heat of formation, 5: 184

Photoconductivity, 6: 66

Residual rays, 5: 261

Solubility in water, 6: 257

Transition temperature, 4: 7

Vapor pressure, 3: 214

-Thallium monobromide*

-Thallium monochloride*

-Thallous nitrate

Freezing point-solubility, 4: 54

Thallium mesotartrate

Crystallography, 1: 320

Density, 1: 118

Refractive index, 1: 118, 172

Thallium oxysulfide, photoconductivity, 6: 66**Thallium phosphate**, electrical conductivity, aqueous solution, 6: 244**Thallium picrate**

Density, 1: 118

Crystallography, 1: 320

Solubility in water, 4: 221

Specific heat, 5: 96

Transition temperature, 4: 7

Thallium selenate

Density, 1: 118

Electrical conductivity, aqueous solution, 6: 244

Refractive index, 1: 118, 173; 7: 20

Solubility in water, 4: 220

Thallium selenide, heat of formation, 5: 184**Thallium selenite**, electrical conductivity, aqueous solution, 6: 244**Thallium tartrate**

Density, 1: 118

Crystallography, 1: 320

Refractive index, 1: 118, 169, 173; 7: 20

Thallium telluride, heat of formation, 5: 184**Thallium thiocyanate**

Electrical conductivity, aqueous solution, 6: 257

Solubility in water, 4: 221; 6: 257

-Potassium thiocyanate*

-Thallium bromate*

-Thallium monochloride*

-Thallous nitrate

Solubility in water, 7: 322

Thallium trichloride, magnetic susceptibility, 6: 357**Thallium trioxide**

-Sulfuric acid*

Thallium vanadous sulfate

Solubility in water, 4: 226

Thallium zinc selenate

Refractive index, 7: 31

Thallium zinc sulfate

Density, **1**: 119
 Refractive index, **1**: 119, 171; **7**: 31
 Solubility in water, **4**: 221

Thallous hydroxide

Decomposition pressure, **7**: 252
 Density, aqueous solution, **3**: 64
 Electrical conductivity, aqueous solution, **6**: 243
 Free energy, **7**: 251
 Decomposition, **7**: 252
 Ionization, **7**: 251
 Heat of decomposition, **7**: 252
 Heat of formation, **5**: 184
 Solubility in water, **4**: 220
 Viscosity, aqueous solution, **5**: 14

Thallous nitrate

Absorption spectra, solutions, **5**: 328
 Allotropic forms, **4**: 12
 Boiling point, **1**: 118, 163
 Boiling point elevation in aqueous solution, **3**: 325
 Compressibility differences, **4**: 12
 Density, **1**: 118; **3**: 44
 Aqueous solution, **3**: 64, 104
 Liquid, **3**: 23; **4**: 442
 Electrical conductivity, aqueous solution, **6**: 231, 237, 240
 Freezing point lowering of aqueous solution, **4**: 255
 Heat of formation, **5**: 184
 Heat of transition, **5**: 184
 Magnetic susceptibility, **6**: 357
 Melting point, **1**: 118
 Melting point under pressure, **4**: 12
 Refractive index, **1**: 118, 174
 Solubility in water, **4**: 220
 Surface tension, **4**: 442
 Transition point, **1**: 118; **3**: 44; **4**: 7
 Vapor pressure, aqueous solution, **3**: 366
 Viscosity, aqueous solution, **5**: 14
 Volume change on melting, **4**: 12
 -Ammonium nitrate*
 -Potassium chloride*
 -Potassium nitrate*
 -Silver nitrate*
 -Sodium nitrate*
 -Thallium acetate*
 -Thallium monobromide*
 -Thallium monochloride*
 -Thallium moniodide*
 -Thallium thiocyanate*
 -Thallous nitrite
 Freezing point-solubility, **4**: 54, 78
 -Thallous oxalate
 Solubility in water, **7**: 332
 -Thallous sulfate
 Solubility in water, **7**: 322

Thallous nitride, heat of formation, **5**: 184

Thallous nitrite

-Thallous nitrate*

Thallous oxalate

Electrical conductivity, aqueous solution, **6**: 258
 Solubility in water, **4**: 221
 -Ammonium oxalate*
 -Hydrogen chloride*
 -Potassium oxalate*
 -Thallous nitrate*

Thallous oxide

Free energy, **7**: 252
 Heat of formation, **5**: 184

Thallous perchlorate

Density, aqueous solution, **3**: 104
 Electrical conductivity, aqueous solution, **6**: 243
 Solubility in water, **4**: 220
 Transition temperature, **4**: 7

Thallous sulfate

Absorption spectra, solutions, **5**: 328

Thallous sulfate.—(Continued)

Boiling point elevation in aqueous solution, **3**: 325
 Density, aqueous solution, **3**: 64, 104, 107
 Electrical conductivity, aqueous solution, **6**: 235
 Freezing point lowering of aqueous solution, **4**: 255
 Heat of formation, **5**: 184
 Magnetic susceptibility, **6**: 357
 Refractive index, **1**: 118, 173; **7**: 20
 Solubility in water, **4**: 220
 Pressure, effect of, **4**: 265
 Transference number, **6**: 309, 310
 Vapor pressure, aqueous solution, **3**: 366
 -Aluminum sulfate*-Potassium sulfate
 -Ammonium sulfate*
 -Cerous sulfate*
 -Nitric acid*
 -Potassium chloride*
 -Sodium hydrogen sulfate*
 -Sodium sulfate*
 -Sulfuric acid*
 -Thallium chlorate*
 -Thallium monochloride*
 -Thallous nitrate*

Thallous sulfide

Electrical conductivity, **6**: 148
 Aqueous solution, **6**: 258
 Heat of formation, **5**: 184
 -Arsenous sulfide*
 -Lead sulfide*
 -Silver sulfide*

Thallous sulfite, solubility in water, **4**: 220

Thallous tetranitrodiammine cobaltate

Solubility in aqueous solutions, **7**: 331

Thalofide. See Thallium oxysulfide.

Thaumasite

Density, **1**: 144
 Refractive index, **1**: 144, 166

Thebaine

Absorption spectra, **5**: 353
 Heat of combustion, **5**: 168
 Optical rotatory power, **7**: 468

Thenardite. See Sodium sulfate.

Theobromine

Absorption spectra, **5**: 341, 369
 Heat of combustion, **5**: 168

Theophylline

Absorption spectra, **5**: 341, 369

Therlo (alloy), **2**: 385

Electrical conductivity, **6**: 168

Thermal capacity. See Specific heat.

Thermal conductivity

Abrasive materials, **2**: 87
 Alloys, **5**: 218
 Building materials, **2**: 55
 Concrete, **2**: 119, 314
 Conversion factors, **1**: 25
 Crystals, **5**: 230
 Definition, **1**: 35
 Electrical conductivity, relation to, **5**: 218
 Felts, **2**: 238
 Gases, **5**: 213
 Pressure, effect of, **5**: 215
 Glass, **2**: 101; **5**: 229
 Liquid, **5**: 226
 Magnesia concretes, **2**: 128
 Magnetic field, effect of, **6**: 424
 Metals, **5**: 218
 Paraffin, **2**: 151
 Petroleum, **2**: 151
 Porcelain, laboratory, **2**: 79
 Powders under reduced pressures, **2**: 315
 Refractory materials, **2**: 85, 316
 Rubber compounding ingredients, **2**: 286
 Solids, **5**: 230
 Standard materials, **5**: 218
 Stress, effect of, **5**: 219

Thermal conductivity.—(Continued)

Temperature, effect of, **5**: 220
 Thermal insulating materials, **2**: 312
 Vegetable fibers, **2**: 238
 Whiteware, **2**: 79

Thermal expansion

Abrasive materials, **2**: 87
 Building materials, **2**: 54
 Carbons, **2**: 303
 Concrete, **2**: 119
 Elements, **1**: 102
 Enamels, vitreous, **2**: 115, 116
 Gelatin solutions, **2**: 227
 Glass, **2**: 93, 99, 100
 Hard rubber, **2**: 300
 Magnesia cement, **2**: 128
 Oils, fats and waxes, **2**: 210
 Petroleum, **2**: 145
 Phenol resins, **2**: 299, 300
 Pitches, **2**: 172
 Porcelain, electrical, **2**: 70
 Porcelain, laboratory, **2**: 78
 Refractory materials, **2**: 83
 Solid insulators, **2**: 311
 Tars, **2**: 172
 Vulcanized fiber, **2**: 300
 Whiteware, **2**: 78
 See also Density.

Thermalloy, **2**: 385

Thermionics, **6**: 53

Thermit (alloy), **2**: 385

Thermochemistry, **5**: 130

Thermocouples

Calibration tables, **1**: 57
 Fixed-junction corrections, **1**: 59
Thermodynamic data, **5**: 87; **7**: 224
Thermodynamic potential, **5**: 87
Thermodynamic temperature scale, **1**: 52
Thermoelectric power, **6**: 213
 Conversion factors, **1**: 29
Thermoelectricity, **6**: 213
Thermolath, **2**: 46
Thermomagnetic effects, **6**: 415

Thermometers

Gas, reduction to thermodynamic scale, **1**: 53
 Liquid-in-glass, **1**: 54
 Emergent stem correction, **1**: 56
 Mercury-in-glass, **1**: 55
 Resistance, **1**: 54
 Stem correction, **1**: 56
 Thermoelectric, **1**: 57
Thermometric chart for human beings, **2**: 326

Thermometric scales, **1**: 52

Thermometry, **1**: 52

Fixed points, **1**: 53

Thermo-microphone, **6**: 457

Thermonatrite, density, **1**: 151

Thermophone, **6**: 456

Thermostat liquids, **1**: 61

Thialdine, heat of combustion, **5**: 169

Thiazine dyes, absorption spectra, **7**: 198

Thioacetic acid

Absorption spectra, **5**: 335
 Dielectric constant, **6**: 84
 Electrical conductivity, **6**: 143
 Aqueous solution, **6**: 262
 -Ethyl ether*

Thiocarbanilide

-Camphor*
 -Pyridine*

Thiocyanatonitrotetrammine cobaltic oxalodinitrodiammine cobaltate

Solubility in aqueous solutions, **7**: 333

Thiocyanatopentammine cobaltic diiodate

Solubility in aqueous solutions, **7**: 330

Thiocyanatopentammine cobaltic sulfate

Solubility in aqueous solutions, **7**: 330

* Data for system will be found under this compound in Index. Full explanation on page vii.

Thiocyanic acid

- Absorption spectra, **5**: 334
- Electrical conductivity, aqueous solution, **6**: 261
- Heat of formation, **5**: 182
- Ethyl ether**

Thioglycolic acid, electrical conductivity, aqueous solution, **6**: 262**Thiohydantoic acid**

- Heat of combustion, **5**: 169

Thiohydantoin, heat of combustion, **5**: 169**Thiolactic acid**

- Optical rotatory power, **7**: 366

Thiomalic acid

- Electrical conductivity, aqueous solution, **6**: 267
- Optical rotatory power, **7**: 373

Thionyl bromide, surface tension, **4**: 447**Thionyl chloride**

- Boiling point, **1**: 107, 162
- Density, **1**: 107; **3**: 22
- Dielectric constant, **6**: 76
- Electrical conductivity, **6**: 142
- Heat of formation, **5**: 178
- Heat of vaporization, **5**: 136
- Refractive index, **1**: 107, 165
- Specific heat, **5**: 106
- Surface tension, **4**: 447
- Aluminum chloride**
- Camphor**
- Chloroform**
- Iodine**
- Sulfonal**

Thiophenazine

- Furfuralazine**

Thiophene

- Absorption spectra, **5**: 332, 336, 363
- Birefringence, magnetic, **7**: 111
- Critical point data, **3**: 248
- Density, **3**: 28
- Dielectric constant, **6**: 86
- Heat of combustion, **5**: 169
- Refractive index, **7**: 35
- Surface tension, **4**: 450
- Verdet constant, **6**: 428
- Viscosity, **7**: 215
- Benzene**
- Triphenylmethane*
- Freezing point-solubility, **4**: 113

 α -Thiophenecarboxylic acid

- Electrical conductivity, aqueous solution, **6**: 268
- Heat of combustion, **5**: 169
- Sulfur**

Thiophenol, surface tension, **4**: 454**Thiophosgene**

- Absorption spectra, **5**: 331, 334

Thiosinamine, heat of fusion, **5**: 132**Thiosulfate ion**, free energy, **7**: 237**Thiosulfuric acid**, heat of formation, **5**: 178**Thiourea**

- Absorption spectra, **5**: 335, 367
- Crystallography, **1**: 324
- Density, aqueous solution, **3**: 111
- Electrical conductivity, aqueous solution, **6**: 261
- Freezing point lowering of aqueous solution, **4**: 262
- Heat of combustion, **5**: 169
- Heat of solution in water, **5**: 148
- Solubility in water, **4**: 251
- Ammonium thiocyanate**
- tert.-Butyl alcohol**
- tert.-Butyl alcohol-Urea*
- Pyridine**

Thiouric acid

- Heat of solution in water, **5**: 149

Thomsenolite

- Density, **1**: 154
- Refractive index, **1**: 154, 168

Thomson coefficient, **6**: 213, 228**Thomson effect**, **1**: 42

- Coefficient of, conversion factors, **1**: 29

Thomson formula (scattering function), **6**: 19**Thoran** (alloy), **2**: 385**Thorianite**

- Density, **1**: 117
- Refractive index, **1**: 117, 165
- See also Thorium dioxide.

Thorite, density, **1**: 117**Thorium**

- Accommodation coefficient, **5**: 53
- Boiling point, **1**: 102
- Density, **1**: 105; **2**: 456
- Electrical conductivity, **1**: 105; **6**: 136
- Electrons, thermal emission of, **6**: 54, 55
- Emission, spectral, **5**: 242
- Emission spectra, **5**: 315
- Heat of vaporization, **7**: 250
- Magnetic susceptibility, **6**: 356
- Melting point, **1**: 105
- Persistent lines, **5**: 324
- Photoelectric threshold, **6**: 68
- Specific heat, **1**: 105; **5**: 94
- Tensile properties, **2**: 592
- Thermionic work function, **6**: 54
- Thermochemistry, **5**: 184
- Tungsten, diffusion in, **5**: 77
- X-ray absorption limits, **6**: 42
- X-ray crystal structure, **1**: 341
- X-ray emission spectra, **6**: 42
- X-ray lines, intensity of, **6**: 26
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption coefficient, **6**: 13, 15
- Zeeman effect, **5**: 420
- Carbon**
- Silicon**

Thorium B

- Lead, diffusion in, **5**: 77
- Rate of solution, **1**: 364
- Thallium, diffusion in, **5**: 77

Thorium C, rate of solution, **1**: 364**Thorium bromide**, heat of formation, **5**: 184**Thorium carbonate**

- Heat of formation, **5**: 184

Thorium chloride

- Absorption spectra, solutions, **5**: 328
- Ammine
 - Decomposition pressure, **7**: 251
 - Heat of decomposition, **7**: 251
 - Heat of formation, **5**: 184
- Density, aqueous solution, **3**: 63
- Electrical conductivity, **6**: 148
- Aqueous solution, **6**: 232
- Heat of formation, **5**: 184
- Specific heat, **5**: 96
- Aqueous solution, **5**: 122

Thorium chromate

- Chromic acid**

Thorium cyanoplatinite

- Luminescence, **5**: 389

Thorium dioxide

- Albedo, **5**: 263
- Decomposition pressure, **7**: 250
- Emission, spectral, **5**: 242
- Heat of formation, **5**: 184
- Heat of vaporization, **7**: 250
- Melting point, **4**: 84
- Specific heat, **5**: 96
- Vapor pressure, **7**: 250
- See also Thorianite.

Thorium hydride

- Heat of formation, **5**: 184

Thorium hydroxide

- Heat of formation, **5**: 184
- Surface tension, aqueous solution, **4**: 464

Thorium iodide, heat of formation, **5**: 184**Thorium nitrate**

- Absorption spectra, solutions, **5**: 328
- Density, aqueous solution, **3**: 63
- Magnetic susceptibility, **6**: 357

Thorium oxalate

- Dehydration behavior of hydrate, **7**: 251

-Ammonium oxalate***-Hydrogen chloride*****-Oxalic acid*****-Sulfuric acid*****Thorium oxide**

- Diffusion in tungsten, **6**: 56
- Electrons, thermal emission of, **6**: 54
- Evaporation from tungsten, **6**: 56
- Thermionic work function, **6**: 54
- X-ray diffraction data, **1**: 342

Thorium oxybromide

- Heat of formation, **5**: 184

Thorium oxychloride

- Heat of formation, **5**: 184

Thorium oxyiodide

- Heat of formation, **5**: 184

Thorium series

- Members and constants, **1**: 363

Thorium sulfate

- Decomposition pressure of hydrate, **7**: 251
- Heat of formation, **5**: 184
- Solubility in water, **4**: 220, 245
- Specific heat, **5**: 96
- Hydrogen chloride**
- Lithium sulfate**
- Potassium sulfate**
- Sodium sulfate**
- Sulfuric acid**

Thoron

- Diffusion coefficient, **1**: 364
- Solubility in non-aqueous liquids, **3**: 264
- Solubility in water, **3**: 257

Thortveitite

- Density, **1**: 138
- Refractive index, **1**: 138, 173

Three-twenty (alloy), **2**: 385, 538, 601 **α -Thujadicarboxylic acid**

- Optical rotatory power, **7**: 446

 α -Thujaketonic acid

- Optical rotatory power, **7**: 444

Thujane

- Heat of combustion, **5**: 164
- Optical rotatory power, **7**: 434

Thujone, optical rotatory power, **7**: 435**Thujyl alcohol**

- Heat of combustion, **5**: 164
- Optical rotatory power, **7**: 454

Thulium

- Emission spectra, **5**: 317
- Persistent lines, **5**: 324
- X-ray absorption limits, **6**: 40
- X-ray emission spectra, **6**: 40
- X-ray series, limiting frequencies, **6**: 35

Thulium chloride

- Absorption spectra, solutions, **5**: 329

Thurston's brass, **2**: 385, 470, 556**Thymol**

- Absorption spectra, **5**: 333, 346
- Birefringence, magnetic, **7**: 111
- Compressibility, **3**: 39
- Critical temperature, **3**: 249
- Cryoscopic constant, **4**: 184
- Crystallography, **1**: 330
- Density, **3**: 45
- Diffusion in methyl alcohol, **5**: 73
- Heat of fusion, **5**: 134
- Melting point under pressure, **4**: 10
- Refractive index, **7**: 51
- Solubility in water, **4**: 253
- Specific heat
 - Liquid, **5**: 112
 - Solid, **5**: 104

* Data for system will be found under this compound in Index. Full explanation on page vii.

Thymol.—(Continued)

- Surface tension, **4**: 460
- Aqueous solution, **4**: 470
- Thermal conductivity, **5**: 216, 228
- Verdet constant, **6**: 430
- Acetic acid*
- Acetone*
- Benzene*
- Benzophenone*
- p-Bromotoluene*
- Carbon tetrachloride*
- Chloral hydrate*
- Chloroacetic acid*
- Cineole*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl ether*
- Hydrogen chloride*
- Methyl alcohol*
- Naphthalene*
- Phenol*
- Phenyl salicylate*
- Picric acid*
- Sulfur*
- Sulfuric acid*
- Trichloroacetic acid
- Freezing point-solubility, **4**: 104
- Trimethylcarbinol
- Freezing point-solubility, **4**: 116
- Thymoquinone**
- Absorption spectra, **5**: 346
- Diffusion in benzene, **5**: 74
- Thymyl ethyl ether**, viscosity, **7**: 221
- Thymyl methyl ether**
- Refractive index, **7**: 55
- Viscosity, **7**: 221
- Thymyl propyl ether**, viscosity, **7**: 221
- Tico** (alloy), **2**: 385; cf. 482
- Tiers argent** (alloy), **2**: 385
- Tiglic acid**
- Electrical conductivity, aqueous solution, **6**: 269
- Heat of combustion, **5**: 165
- Refractive index, **7**: 37
- Tilasite**
- Density, **1**: 146
- Refractive index, **1**: 146, 172
- Tiles**, **2**: 65
- Time**
- Astronomical unit, **1**: 34
- Chronological eras, **1**: 391
- Conversion factors, **1**: 20
- Definitions, **1**: 42
- Divisions, **1**: 391
- Equation, **1**: 391
- Tin**
- Absorption, index of, **5**: 250
- Boiling point, **1**: 102; **3**: 205
- Cathodoluminescence, **5**: 390
- Compressibility, **3**: 47, 49
- Contact potential, **6**: 57
- Critical potentials, **6**: 72
- Density
- Liquid, **1**: 102; **2**: 457, 463
- Solid, **1**: 104; **2**: 456
- Electrical conductivity
- Liquid, **1**: 103
- Solid, **1**: 104; **6**: 136, 137, 140
- Low temperature, **6**: 129, 134
- Magnetic field, effect of, **6**: 422
- Single crystals, **6**: 135
- Electrode potential, **6**: 320, 332; **7**: 247
- Electrons, absorption of, by, **6**: 61
- Electrons, transmitted, velocity of, **6**: 62
- Electrons excited by X-rays, number of, **6**: 5
- Electrons freed by X-rays, energy of, **6**: 4
- Emission, spectral, **5**: 254, 255
- Emission spectra, **5**: 314
- Entropy, **5**: 89

Tin.—(Continued)

- Entropy of allotropic transformation, **7**: 247
- Free energy
- Allotropic transformation, **7**: 247
- Electrode reaction, **7**: 247
- Gamma rays, absorption coefficient, **6**: 14, 21
- Gold, diffusion of, in, **5**: 75
- Hall effect, **6**: 416, 417
- Heat content, **5**: 89
- Heat of allotropic transformation, **7**: 247
- Heat of fusion, **1**: 104; **2**: 458
- Heat of transformation, **2**: 458; **5**: 183
- Heat of vaporization, **1**: 102
- Hydrogen, solubility of, in, **3**: 270
- Isotopes, **1**: 47
- Lead, diffusion of, in, **5**: 75
- Lead ion, reaction with, **7**: 248
- Magnetic susceptibility, **6**: 355
- Magneton number, **6**: 346
- Mechanical properties, **2**: 557
- Melting point, **1**: 53, 104
- Nernst effect, **6**: 420
- Persistent lines, **5**: 324
- Photoelectric threshold, **6**: 68
- Quantum numbers, **5**: 408
- Refractive index, **1**: 103; **5**: 250
- Silver, diffusion of, in, **5**: 75
- Solution velocity in salt solution, **5**: 57, 58
- Sound, velocity of, in, **6**: 465
- Specific heat
- Liquid, **1**: 103; **5**: 94
- Solid, **1**: 104; **5**: 86, 89, 94
- Spectral series, **5**: 404
- Surface tension, **4**: 440
- Thermal conductivity, **5**: 220, 221
- Thermal expansion
- Liquid, **1**: 102; **2**: 463
- Solid, **1**: 104; **2**: 462
- Thermochemistry, **5**: 183
- Thermodynamic potential, **5**: 89
- Thermoelectric properties, **6**: 214, 225, 226
- Thomson coefficient, **6**: 228
- Vapor pressure, **3**: 205
- Viscosity, liquid, **5**: 10
- Volume change on fusion, **2**: 474
- Volume change on solidification, **2**: 475
- X-radiation from target of, **6**: 47
- X-ray absorption limits, **6**: 38, 45
- X-ray crystal structure, **1**: 340
- X-ray emission spectra, **6**: 38
- X-ray series, limiting frequencies, **6**: 35
- X-rays, absorption, discontinuity in, **6**: 12
- X-rays, absorption coefficient, **6**: 13–15
- X-rays, scattering coefficient, **6**: 17
- Zeeman effect, **5**: 420, 429
- Aluminum*
- Aluminum*-Bismuth
- Aluminum-Cadmium
- Aluminum*-Copper
- Aluminum*-Copper-Iron-Manganese-Zinc
- Aluminum*-Copper-Zinc
- Aluminum*-Iron
- Aluminum*-Lead
- Aluminum*-Zinc
- Antimony*
- Antimony*-Copper
- Antimony*-Copper-Lead
- Antimony*-Copper-Lead-Zinc
- Antimony*-Copper-Zinc
- Antimony*-Lead
- Arsenic*-Copper-Lead-Zinc
- Arsenic*-Copper-Zinc
- Bismuth*
- Bismuth*-Cadmium-Lead
- Bismuth*-Copper

Tin.—(Continued)

- Bismuth*-Lead
- Bismuth*-Zinc
- Cadmium*
- Cadmium*-Lead
- Carbon monoxide*
- Cerium*
- Cobalt*
- Copper*
- Copper*-Iron
- Copper*-Iron-Lead-Zinc
- Copper*-Iron-Zinc
- Copper*-Lead
- Copper*-Lead-Zinc
- Copper*-Manganese
- Copper*-Mercury-Silver
- Copper*-Nickel
- Copper*-Nickel-Zinc
- Copper*-Phosphorus
- Copper*-Silicon
- Copper*-Tungsten
- Copper*-Zinc
- Gold*
- Iodine*
- Iron*
- Iron*-Silicon
- Lead*
- Lead*-Zinc
- Lithium*
- Magnesium*
- Mercury*
- Nickel*
- Potassium*
- Selenium*
- Silver*
- Sodium*
- Sulfur*
- Tellurium*
- Thallium*
- Water
- Equilibrium constant of reaction, **7**: 247
- Zinc
- Electrical conductivity, **6**: 195, 200
- Equilibrium diagram, **2**: 417
- Magnetic susceptibility, **6**: 365
- Sound, velocity of, in, **6**: 465
- Specific heat, **5**: 121
- Thermal conductivity, **5**: 226
- Thermal expansion, **2**: 474
- Thermoelectric properties, **6**: 222
- Volume change on solidification, **2**: 475
- Tin alloys**, list of, **2**: 390
- Tin amalgams**
- Partial vapor pressure, **3**: 284
- X-ray diffraction data, **1**: 348
- Tin arsenide**
- Electrical conductivity, **6**: 153
- Tin chloride**, band spectra, **5**: 416
- Tin hemitriarsenide**
- Electrical conductivity, **6**: 153
- Tin salts.** See Stannic and Stannous.
- Tin sesquioxide**
- Magnetic susceptibility, **6**: 356
- Tin tritadiarsenide**
- Electrical conductivity, **6**: 153
- Tinfoil**, **2**: 385
- Tinsel**, **2**: 385
- Tissier's brass**, **2**: 385
- Titan bronze**, **2**: 385; cf. 556
- Titanite**
- Density, **1**: 144
- Melting point, **1**: 144
- Refractive index, **1**: 144, 173; **7**: 24
- Titanium**
- Boiling point, **1**: 102
- Cathodoluminescence, **5**: 390
- Critical potentials, **6**: 72
- Density, **1**: 105; **2**: 456

* Data for system will be found under this compound in Index. Full explanation on page vii.

Titanium.—(Continued)

- Electrical conductivity, **1**: 105; **6**: 136
- Low temperature, **6**: 129, 134
- Electronic structure, normal and excited, **6**: 72
- Emission, spectral, **5**: 242
- Emission spectra, **5**: 316
- Heat of vaporization, **7**: 247
- Isotopes, **1**: 47
- Magnetic susceptibility, **6**: 356
- Melting point, **1**: 105
- Persistent lines, **5**: 324
- Quantum numbers, **5**: 408
- Specific heat, **1**: 105; **5**: 94
- Spectral series, **5**: 405
- Thermochemistry, **5**: 182
- X-ray absorption limits, **6**: 36, 44
- X-ray absorption spectra, **6**: 36
- X-ray crystal structure, **1**: 341
- X-ray series, limiting frequencies, **6**: 35
- Zeeman effect, **5**: 420
- Aluminum*
- Carbon*-Iron
- Chromium*-Iron-Silicon
- Copper*
- Copper*-Nickel
- Iron*
- Iron*-Nickel
- Nickel*
- Silicon*

Titanium carbide

- X-ray diffraction data, **1**: 341

Titanium dichloride

- Verdet constant, **6**: 426

Titanium dioxide

- Band spectra, **5**: 416
- Compressibility, **3**: 50
- Decomposition of, **4**: 84
- Decomposition pressure, **7**: 247
- Electrical conductivity, **6**: 153
- Electrons, thermal emission of, **6**: 54
- Emission, spectral, **5**: 242
- Heat of formation, **5**: 182
- Heat of transition, **5**: 182
- Heat of vaporization, **7**: 247
- Magnetic susceptibility, **6**: 356
- Specific heat, **5**: 96
- Thermal expansion, **3**: 43
- Thermionic work function, **6**: 54
- X-ray diffraction data, **1**: 341
- See also Anatase, Brookite.
- Aluminum oxide*-Manganese oxide
- Calcium oxide*-Silica
- Manganous oxide*
- Manganous oxide*-Silica

Titanium disulfide

- Magnetic susceptibility, **6**: 356

Titanium nitride

- X-ray diffraction data, **1**: 341

Titanium steel, **2**: 385, 478**Titanium tetrabromide**

- Cryoscopic constant, **4**: 214
- Stannic bromide*

Titanium tetrachloride

- Boiling point, **1**: 113, 163
- Density, **1**: 113; **3**: 23
- Entropy, **7**: 247
- Heat of formation, **5**: 183
- Heat of fusion, **5**: 131
- Melting point, **1**: 113
- Refractive index, **1**: 113, 165
- Specific heat
 - Gas, **5**: 81
 - Liquid, **5**: 106
 - Solid, **5**: 96
- Verdet constant, **6**: 426, 427
- Chlorine*
- Sulfur dioxide*

Titanium trisulfide

- Magnetic susceptibility, **6**: 356

Titanium white, rubber, effect on, **2**: 287**Titanous ion**, hydrogen ion, equilibrium constant, **7**: 247**Tobacco**, moisture content at various humidities, **2**: 322, 325**Tobin bronze**, **2**: 385, 556**Tolane**

- Absorption spectra, **5**: 350
- Heat of fusion, **5**: 134
- Magnetic susceptibility, **6**: 363
- Azobenzene*
- Benzalaniline*
- Benzylaniline*
- Dibenzyl*
- Hydrazobenzene*
- Stilbene*

Toluene

- Absorption spectra, **5**: 332, 341, 361
- Azeotropic mixtures, **3**: 318-321
- Birefringence, **7**: 111, 113
- Boiling point, **3**: 223, 346
- Bromination, photochemical, **7**: 165, 168
- Compressibility, **3**: 37, 39
- Critical point data, **3**: 245, 249
- Critical potentials, **6**: 72
- Density, **3**: 29, 33
- Dielectric constant, **6**: 82, 92, 105
- Diffusion of vapor in gases, **5**: 62
- Electrical conductivity, **6**: 144
- Emission, spectral, **5**: 258
- Faraday effect, lag in, **6**: 434
- Flash point, **2**: 161
- Heat of combustion, **5**: 163
- Heat of vaporization, **5**: 137
- Heat of wetting by, **5**: 142
- Ignition temperature, **2**: 174
- Inflammability, limits of, **2**: 179
- Internal pressure, **4**: 19
- Magnetic susceptibility, **6**: 362
- Melting point, **1**: 54
- Orthobaric density, **3**: 245
- Photoluminescence, **5**: 386
- Polarization of light reflected from, **5**: 261
- Polarization of light scattered by
 - Gas, **5**: 266
 - Liquid, **5**: 267
- Refractive index, **6**: 90; **7**: 12, 40, 77
- Solidification point, **1**: 61
- Solubility in water, **3**: 391
- Sound, velocity of, in, **6**: 464
- Specific heat, **5**: 111, 115
- Surface tension, **4**: 437, 456
- Thermal conductivity, **5**: 228
- Pressure, effect of, **5**: 227
- Vapor pressure, **3**: 223
- Verdet constant, **6**: 427
- Viscosity, **5**: 27, 46; **7**: 218, 223
- X-rays, absorption coefficient, **6**: 14, 16
- Acenaphthene*
- Acetanilide*
- Acetic acid*
- Acetone*
- Acetone*-Benzene
- Allyl thiocyanate*
- Allyl thiocyanate*-Aniline
- Aluminum bromide*
- Aluminum chloride*
- p-Anethole*
- Aniline*
- Anthracene*
- Anthraquinone*
- Antimony tribromide*
- Antimony trichloride*
- Azobenzene*
- Benzene*
- Benzene*-Chlorobenzene
- Benzene*-Chlorobenzene-Ethyl propionate
- Benzene*-Ethyl lactate-Methyl propionate

Toluene.—(Continued)

- Benzene*-Ethyl propionate
- Benzene*-Methyl butyrate-Methyl propionate
- Benzene*-Methyl butyrate-Propyl acetate
- Benzene*-Methyl propionate
- Benzene*-Water
- Benzil*
- Benzoic acid*
- 2-Benzoylcyclohexanone*
- 2-Benzoylcyclopentanone*
- Benzyl benzoate*
- Bromobenzene*
- Bromoform*
- β-Bromonaphthalene*
- Butyric acid*
- Caffeine*
- Camphor*
- Camphoric acid*
- Carbazole*
- Carbon disulfide*
- Carbon tetrachloride*
- Carbon tetrachloride*-Ethylene bromide
- Castor oil*
- Chloral hydrate*
- Chlorine*
- Chloroacetic acid*
- Chlorobenzene*
- Chloroform*
- m-Cresol*
- Cupric chloride*-Ethyl alcohol
- Cyclohexane*
- p-Dibromobenzene*
- Dichloroacetic acid*
- Diethyl tartrate*
- Diethylamine*
- Dimethylamine*
- Dimethylaniline*
- Dimethyl-o-toluidine*
- m-Dinitrobenzene*
- m-Dinitrobenzene*-Naphthalene
- Diphenyl*
- Dipropylamine*
- Durene*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl benzoate*
- Ethyl ether*
- Ethyl formate*
- Ethyl propionate*
- Ethylamine*
- Ethylbenzene*
- Ethylene bromide*
- Ethylene chloride*
- Fluorene*
- Formic acid*
- Heptane*
- Hexachloroethane*
- Hydrogen bromide*
- Hydrogen chloride*
- Hydrogen iodide*
- Hydrogen sulfide*
- Iodine*
- Isobutyric acid*
- Lauric acid*
- Mercuric chloride*
- p-Methoxypropylbenzene*
- Methyl alcohol*
- Methyl propionate*
- Methylchavicol*
- Naphthalene*
- Nitrobenzene*
- Nitrogen tetroxide*
- Nitrophenol (o-, m-, p-)*
- m-Nitrotoluene*
- Petroleum*
- Phenacetine*
- Phenanthrene*
- Phenol*
- Phenyl salicylate*
- Phenylacetic acid*

Toluene.—(Continued)

- Phosphorus sesquisulfide*
- Picric acid*
- Piperidine*
- Propionic acid*
- Propylamine*
- Pyridine*
- Salicylic acid*
- Silver perchlorate*
- Stearic acid*
- Stilbene*
- Sulfur*
- Sulfur dioxide*
- o*-Toluidine
 - Density, **3**: 187
 - Surface tension, **4**: 474
- m*-Toluidine
 - Density, **7**: 86
 - Refractive index, **7**: 86
 - Dispersion, **7**: 105
- p*-Toluidine
 - Density, **3**: 187
 - Boiling point elevation, **3**: 346
- Triethylamine
 - Distribution coefficients in water, **3**: 429
- Trimethylamine
 - Distribution coefficients in water, **3**: 425
- 1, 2, 4-Trimethylbenzene
 - Density, **3**: 188
- 2, 3, 4-Trimethylpyridine
 - Distribution coefficients in water, **3**: 431
- Triphenylmethane
 - Density, **3**: 188
 - Heat of solution, **5**: 154
- Tripropylamine
 - Distribution coefficients in water, **3**: 432
- Turpentine
 - Density, **3**: 188
 - Dielectric constant, **6**: 103
 - Viscosity, **5**: 49
- Urethan
 - Boiling point elevation, **3**: 346
 - Density, **3**: 164
 - Dielectric constant, **6**: 102
 - Freezing point-solubility, **4**: 112
 - Heat of solution, **5**: 153
- Water
 - Vapor phase compositions, **3**: 364
- p*-Xylene
 - Heat of solution, **5**: 157
- o*-Toluenesulfonamide
 - p*-Toluenesulfonamide
 - Freezing point-solubility, **4**: 180
- o*-Toluenesulfone chloride
 - p*-Toluenesulfone chloride
 - Freezing point-solubility, **4**: 179
- p*-Toluenesulfonic acid
 - Electrical conductivity, aqueous solution, **6**: 281
 - Heat of solution in water, **5**: 150
 - Viscosity, aqueous solution, **5**: 21
- p*-Toluenesulfonylcinchonicine
 - Acetone*
 - Ethyl alcohol*
- Toluic acid**
 - Nitrogen tetroxide*
- o*-Toluic acid
 - Absorption spectra, **5**: 343
 - Activity coefficient, **7**: 246
 - Boiling point elevation in aqueous solution, **3**: 327
 - Electrical conductivity, aqueous solution, **6**: 285
 - Free energy
 - Ionization, **7**: 246
 - Solution, **7**: 246
 - Heat of combustion, **5**: 165

***o*-Toluic acid.**—(Continued)

- Heat of fusion, **5**: 134
- Ionization constant, **7**: 246
- Photoluminescence, **5**: 387
- Solubility in water, **3**: 391; **4**: 253
- Specific heat
 - Liquid, **5**: 111
 - Solid, **5**: 104
- Chloroacetic acid*
- Dichloroacetic acid*
- Dimethylpyrone*
- Picric acid*
- Sulfuric acid*
- Trichloroacetic acid
 - Freezing point-solubility, **4**: 103
- m*-Toluic acid
 - Absorption spectra, **5**: 343
 - Electrical conductivity, aqueous solution, **6**: 285
 - Heat of combustion, **5**: 165
 - Heat of fusion, **5**: 134
 - Photoluminescence, **5**: 387
 - Solubility in water, **3**: 392; **4**: 253
 - Specific heat
 - Liquid, **5**: 111
 - Solid, **5**: 104
 - Chloroacetic acid*
 - Dichloroacetic acid*
 - Dimethylpyrone*
 - Picric acid*
 - Sulfuric acid*
 - Trichloroacetic acid
 - Freezing point-solubility, **4**: 103
- p*-Toluic acid
 - Absorption spectra, **5**: 343
 - Electrical conductivity, aqueous solution, **6**: 285
 - Heat of combustion, **5**: 165
 - Heat of fusion, **5**: 134
 - Photoluminescence, **5**: 387
 - Solubility in water, **3**: 392; **4**: 253
 - Specific heat
 - Liquid, **5**: 111
 - Solid, **5**: 104
 - Vapor pressure, **3**: 209
 - Chloroacetic acid*
 - Dichloroacetic acid*
 - Dimethylpyrone*
 - Sodium *p*-toluate*
 - Sulfuric acid*
 - Trichloroacetic acid
 - Freezing point-solubility, **4**: 103
- Toluic aldehyde** (*o*-, *m*-, *p*-)
 - Absorption spectra, **5**: 343
 - Refractive index, **7**: 43
- Toluidine**
 - Toxicology, **2**: 320
 - Methyl alcohol*
- o*-Toluidine
 - Absorption spectra, **5**: 333, 342, 362
 - Azeotropic mixtures, **3**: 323
 - Birefringence, electric, **7**: 111
 - Boiling point, **3**: 223
 - Compressibility, **3**: 37
 - Density, **3**: 29, 33
 - Dielectric constant, **6**: 92
 - Electrical conductivity, **6**: 144
 - Heat of combustion, **5**: 168
 - Heat of fusion, **5**: 133
 - Heat of solution in water, **5**: 150
 - Melting point under pressure, **4**: 16
 - Refractive index, **7**: 41
 - Rubber, solubility in, **2**: 272
 - Solubility in salt solutions, **4**: 419
 - Solubility in water, **3**: 391; **4**: 251
 - Specific heat
 - Liquid, **5**: 111
 - Solid, **5**: 104
 - Surface tension, **4**: 457
 - Aqueous solution, **4**: 469
 - Thermal conductivity, **5**: 228
 - Solid, **5**: 216
 - Transition temperature, **4**: 8
 - Vapor pressure, **3**: 223
 - Verdet constant, **6**: 429
 - Viscosity, **5**: 46, 47; **7**: 218
 - Volume change on melting, **4**: 16
 - Acetic acid*
 - Aminophenol (*m*-, *p*-)*
 - Aniline*
 - Anthracene*
 - Benzil*
 - Benzoic acid*
 - Benzophenone*
 - Camphor*

***o*-Toluidine.**—(Continued)

- Carbon dioxide*
- m*-Cresol*
- Diethyl tartrate*
- Ethyl alcohol*
- Glycerol*
- Isoamyl acetate*
- α -Naphthylamine*
- Nitrobenzene*
- Nitrosodimethylaniline*
- Phenol*
- Quinoline*
- Toluene*
- p*-Toluidine
 - Density, **3**: 189
 - Freezing point-solubility, **4**: 179
- m*-Toluidine
 - Absorption spectra, **5**: 342, 362
 - Birefringence, electric, **7**: 111
 - Boiling point, **3**: 223
 - Compressibility, **3**: 37
 - Dielectric constant, **6**: 92
 - Heat of combustion, **5**: 168
 - Refractive index, **7**: 41
 - Sound, velocity of, in, **6**: 464
 - Surface tension, **4**: 457
 - Vapor pressure, **3**: 223
 - Verdet constant, **6**: 429
 - Viscosity, **7**: 218
 - Acetic acid*
 - Benzene*
 - Carbon dioxide*
 - Cyclohexane*
 - Diethyl tartrate*
 - Disoamyl*
 - Glycerol*
 - Hexane*
 - Hydrogen peroxide*
 - Isoamyl acetate*
 - Methylcyclohexane*
 - Toluene*
 - p*-Toluidine
 - Freezing point-solubility, **4**: 179
- p*-Toluidine
 - Absorption spectra, **5**: 333, 342, 361, 362
 - Azeotropic mixtures, **3**: 323
 - Boiling point, **3**: 223, 346
 - Compressibility, **3**: 39
 - Cryoscopic constant, **4**: 183, 215
 - Density, **3**: 29
 - Dielectric constant, **6**: 92
 - Electrical conductivity, **6**: 144
 - Heat of adiabatic expansion, **5**: 147
 - Heat of combustion, **5**: 168
 - Heat of fusion, **5**: 133
 - Heat of solution in water, **5**: 150
 - Melting point under pressure, **4**: 16
 - Refractive index, **7**: 41
 - Rubber, solubility in, **2**: 272
 - Solubility in salt solutions, **4**: 419
 - Solubility in water, **3**: 391; **4**: 251
 - Specific heat
 - Liquid, **5**: 111
 - Solid, **5**: 104
 - Surface tension, **4**: 457
 - Aqueous solution, **4**: 469
 - Thermal conductivity, **5**: 228
 - Solid, **5**: 216
 - Transition temperature, **4**: 8
 - Vapor pressure, **3**: 223
 - Verdet constant, **6**: 429
 - Viscosity, **5**: 46, 47; **7**: 218
 - Volume change on melting, **4**: 16
 - Acetic acid*
 - Aminophenol (*m*-, *p*-)*
 - Aniline*
 - Anthracene*
 - Benzil*
 - Benzoic acid*
 - Benzophenone*
 - Camphor*

* Data for system will be found under this compound in Index. Full explanation on page vii.

p-Toluidine.—(Continued)

- Carbon dioxide*
- Carbon tetrachloride*
- Catechol*
- Chloroform*
- Dichloromethane*
- Diethyl tartrate*
- Dimethyl oxalate*
- Dinitrobenzene (o-, m-, p-)*
- 2, 4-Dinitrotoluene*
- 2, 6-Dinitrotoluene*
- 3, 4-Dinitrotoluene*
- 3, 5-Dinitrotoluene*
- Diphenylamine*
- Ethyl alcohol*
- Ethyl alcohol*-Water
- Ethyl ether*
- Hydroquinol*
- Indigotin*
- Isoamyl acetate*
- Menthol*
- Naphthalene*
- Naphthol (α -, β -)*
- Naphthylamine (α -, β -)*
- Nitrophenol (o-, m-, p-)*
- Nitrosodimethylaniline*
- Phenol*
- Pyridine*
- Pyrogallol*
- Resorcinol*
- Toluene*
- Toluidine (o-, m-)*
- Trimethylcarbinol
- Freezing point-solubility, 4: 116
- Triphenylcarbinol
- Freezing point-solubility, 4: 152
- Triphenylmethane
- Freezing point-solubility, 4: 152
- p-Toluidine chloroacetate**
- Benzene*
- Carbon tetrachloride*
- Chloroform*
- Cyclohexane*
- Dichloromethane*
- Ethyl ether*
- p-Toluidine hydrochloride**
- Heat of solution in water, 5: 150
- p-Toluidine salicylate**
- Benzene*
- Carbon tetrachloride*
- Cyclohexane*
- Dichloromethane*
- Toluidinesulfonic acids**, electrical conductivity, aqueous solution, 6: 281
- Tolunitrile**
- Critical temperature, 3: 249
- Electrical conductivity, 6: 144
- o-Tolunitrile**
- Absorption spectra, 5: 342
- Dielectric constant, 6: 93
- Photoluminescence, 5: 386
- Refractive index, 7: 42
- Surface tension, 4: 457
- Verdet constant, 6: 429
- m-Tolunitrile**
- Absorption spectra, 5: 342
- Photoluminescence, 5: 387
- Surface tension, 4: 457
- p-Tolunitrile**
- Absorption spectra, 5: 342
- Photoluminescence, 5: 387
- Surface tension, 4: 457
- Verdet constant, 6: 429
- Toluquinolines**, refractive index, 7: 49
- Toluquinone**
- Absorption spectra, 5: 341, 377
- Surface tension, 4: 455
- p-Toluyacetophenone**
- Refractive index, 7: 30
- p-Tolyl allyl ether**
- Verdet constant, 6: 430

- o-Tolyl methyl ether**
- Dielectric constant, 6: 93
- Verdet constant, 6: 429
- m-Tolyl methyl ether**
- Dielectric constant, 6: 93
- Verdet constant, 6: 429
- p-Tolyl methyl ether**
- Dielectric constant, 6: 93
- Surface tension, 4: 458
- Verdet constant, 6: 429
- p-Tolyl dimethylcarbinol**
- Refractive index, 7: 51
- Quinoline*
- β -Tolylmethoxycinnamic acid**
- Heat of combustion, 5: 166
- Tolylmethylcarbinol (m-, p-)**
- Refractive index, 7: 47
- Tombac (alloy)**, 2: 385; cf. 469, 555, 600
- Tone generator**, Hewlett, 6: 455
- Tones**, audible, range of, 1: 94
- Tonvibrator**, 6: 456
- Tool steel**, 2: 385
- Topaz**
- Compressibility, 3: 50
- Density, 1: 137
- Dielectric constant, 6: 100
- Magnetic susceptibility, 6: 364
- Refractive index, 1: 137, 171; 7: 22
- Specific heat, 5: 98
- Thermal conductivity, 5: 231
- Thermal expansion, 3: 44
- Tophet (alloy)**, 2: 385; cf. 480
- Electrical conductivity, 6: 194
- Torbernite**
- Density, 1: 134
- Refractive index, 1: 134, 171
- Torpedo bronze**, 2: 385; cf. 470, 556, 602
- Torque**, conversion factors, 1: 24
- Torsional strength**, definition, 2: viii
- Toucas (alloy)**, 2: 385
- Touch**, reaction times to, 1: 95
- Tourmaline**
- Compressibility, 3: 50
- Dielectric constant, 6: 99
- Emission, spectral, 5: 258, 259
- Magnetic susceptibility, 6: 364
- Piezoelectric constant, 6: 209, 210
- Pyroelectric constant, 6: 209, 210
- Refractive index, 7: 27
- Thermal conductivity, 5: 231
- Thermal expansion, 3: 45
- X-ray diffraction data, 1: 346
- Tournay's metal**, 2: 385; cf. 469, 555
- Tourun Leonard's metal**, 2: 385; cf. 561
- Toxicology**, 2: 318
- Trabuk metal**, 2: 385
- Trachyte**
- Compressive strength, 2: 48
- Hardness, 2: 50
- Impact hardness, 2: 51
- Tensile strength, 2: 49
- Thermal diffusivity, 2: 316
- Transference numbers**, 6: 309
- Electromotive force method, 6: 311
- Gravimetric method, 6: 309
- Moving boundary method, 6: 310
- Transformation, heat of**
- Metals, 2: 458
- Non-metals, 5: 169
- Transformation temperatures**, magnetic, 6: 408
- Transformer oils**, bromine and iodine numbers, 2: 154
- Transmission of radiation**
- Non-spectral, 5: 264
- Spectral, 5: 268
- Transition, heat of**, 5: 169
- Transition points**, 1: 106, 314; 4: 6
- Films, 4: 476
- Liquid crystals, 1: 314

Transition points.—(Continued)

- Pressure, effect of, 4: 9, 264
- Volume change at, 4: 9
- Trap rock**, thermal diffusivity, 2: 316
- Trauzl lead-block test**, 7: 489
- Travertine**, thermal conductivity, 2: 55
- Trechmannite**
- Density, 1: 124
- Refractive index, 1: 124, 168
- Trehalose**
- Crystallography, 1: 332
- Heat of combustion, 5: 166
- Solubility in aqueous ethyl alcohol, 4: 405
- Tremolite**
- Density, 1: 146
- Refractive index, 1: 146, 171; 7: 25
- Thermal conductivity, 5: 232
- Triacetin**
- Absorption spectra, 5: 333
- Electrical conductivity, 6: 145
- Saponification constants, 7: 135
- Viscosity, 7: 220
- Triacetonediamine dihydrochloride zinc chloride trihydrate**
- Refractive index, 7: 20
- Triammonium trisodium aluminum oxalate**
- Dehydration behavior of hydrate, 7: 306
- Triammonium trisodium ferrioxalate**
- Dehydration behavior of hydrate, 7: 306
- Triamylammonium bromide**
- Acetone*
- Methyl acetate*
- Triamylammonium chloride**
- Acetone*
- Methyl acetate*
- Triamylammonium fluoride**
- Methyl acetate*
- Triamylammonium picrate**
- Benzene*
- Carbon tetrachloride*
- Dichloromethane*
- Ethyl ether*
- Triamylammonium thiocyanate**
- Acetone*
- Benzene*
- Methyl acetate*
- Trianilinophosphine oxide**
- Magnetic susceptibility, 6: 364
- Triazobenzene**
- Verdet constant, 6: 429
- Tribenzylamine**
- Absorption spectra, 5: 334, 354
- Heat of combustion, 5: 168
- Surface tension, 4: 462
- Viscosity, 7: 222
- Aniline*
- p-Bromotoluene*
- Phenol*
- Tribenzylammonium bromide**, electrical conductivity, aqueous solution, 6: 234
- Tribenzylammonium chloride**
- Chloroform*
- Tribenzylmethylammonium bromide**
- Concentration cells, 6: 324
- Tribromide ion**, free energy, 7: 234
- Tribromoacetamide**
- Trichloroacetamide
- Freezing point-solubility, 4: 105
- Tribromoacetic acid**
- Density, aqueous solution, 3: 113
- Diffusion in methyl alcohol, 5: 72
- Electrical conductivity, aqueous solution, 6: 261
- Heat of solution in water, 5: 148, 159
- 1, 1-Dichloroethane*
- Nitrogen tetroxide*
- 2, 4, 6-Tribromoaniline**
- Heat of fusion, 5: 132
- Antimony tribromide*
- Antimony trichloride*

2, 4, 6-Tribromoaniline.—(Continued)

- 2-Chloro-4, 6-dibromoaniline*
- Isoamyl acetate*
- Tribromoanilinesulfonic acids**, electrical conductivity, aqueous solution, **6**: 271
- Tribromobenzene**
 - Diffusion in methyl alcohol, **5**: 72
- Tribromobenzenediazonium chloride**
 - Intramolecular transformation, **7**: 118
- 1, 1, 2-Tribromoethane**
 - Refractive index, **7**: 34
 - Verdet constant, **6**: 428
- Tribromoethylene**, refractive index, **7**: 34
- 2, 4, 6-Tribromophenol**
 - Absorption spectra, **5**: 338
 - Cryoscopic constant, **4**: 183
 - Diffusion in methyl alcohol, **5**: 72
 - Heat of fusion, **5**: 132
 - Acetyltribromophenol*
 - Trichlorophenol
 - Freezing point-solubility, **4**: 118
 - 1, 3, 5-Trinitrobenzene
 - Freezing point-solubility, **4**: 118
- 1, 2, 3-Tribromopropane**
 - Dielectric constant, **6**: 85
 - Magnetic susceptibility, **6**: 361
 - Surface tension, **4**: 436, 449
 - Verdet constant, **6**: 428
- 2, 3, 4-Tribromotoluene**
 - 2, 3, 5-Tribromotoluene
 - Freezing point-solubility, **4**: 144
 - 2, 3, 6-Tribromotoluene
 - Freezing point-solubility, **4**: 145
 - 2, 4, 5-Tribromotoluene
 - Freezing point-solubility, **4**: 145
 - 2, 4, 6-Tribromotoluene
 - Freezing point-solubility, **4**: 145
 - 3, 4, 5-Tribromotoluene
 - Freezing point-solubility, **4**: 145
- 2, 3, 5-Tribromotoluene**
 - 2, 3, 4-Tribromotoluene*
 - 2, 3, 6-Tribromotoluene
 - Freezing point-solubility, **4**: 145
 - 2, 4, 5-Tribromotoluene
 - Freezing point-solubility, **4**: 145
 - 2, 4, 6-Tribromotoluene
 - Freezing point-solubility, **4**: 145
 - 3, 4, 5-Tribromotoluene
 - Freezing point-solubility, **4**: 145
- 2, 3, 6-Tribromotoluene**
 - 2, 3, 4-Tribromotoluene*
 - 2, 3, 5-Tribromotoluene*
 - 2, 4, 5-Tribromotoluene
 - Freezing point-solubility, **4**: 145
 - 2, 4, 6-Tribromotoluene
 - Freezing point-solubility, **4**: 145
 - 3, 4, 5-Tribromotoluene
 - Freezing point-solubility, **4**: 145
- 2, 4, 5-Tribromotoluene**
 - 2, 3, 4-Tribromotoluene*
 - 2, 3, 5-Tribromotoluene*
 - 2, 3, 6-Tribromotoluene*
 - 2, 4, 6-Tribromotoluene
 - Freezing point-solubility, **4**: 145
 - 3, 4, 5-Tribromotoluene
 - Freezing point-solubility, **4**: 145
- 2, 4, 6-Tribromotoluene**
 - 2, 3, 4-Tribromotoluene*
 - 2, 3, 5-Tribromotoluene*
 - 2, 3, 6-Tribromotoluene*
 - 2, 4, 5-Tribromotoluene*
 - 3, 4, 5-Tribromotoluene
 - Freezing point-solubility, **4**: 145
- 3, 4, 5-Tribromotoluene**
 - 2, 3, 4-Tribromotoluene*
 - 2, 3, 5-Tribromotoluene*
 - 2, 3, 6-Tribromotoluene*
 - 2, 4, 5-Tribromotoluene*
 - 2, 4, 6-Tribromotoluene*
- Tributylin**, surface tension, **4**: 462

Tricalcium aluminate

- Decomposition temperature, **4**: 84
- Tricalcium decaluminate**
 - Melting point, **1**: 145; **4**: 84
 - Refractive index, **1**: 145, 165
 - Gehlenite*
- Tricalcium dialuminate**
 - Melting point, **1**: 145
 - Refractive index, **1**: 145, 167
- Tricaprin**, surface tension, **4**: 463
- Tricaproin**, surface tension, **4**: 463
- Tricaprylin**, surface tension, **4**: 463
- Tricarballic acid**
 - Absorption spectra, **5**: 340, 375
 - Electrical conductivity, aqueous solution, **6**: 275
 - Heat of combustion, **5**: 165
 - Heat of solution in water, **5**: 150
- Trichalcite**, refractive index, **1**: 123, 172
- Trichloroacetamide**
 - Acetone*
 - Benzene*
 - Chloroform*
 - Ethyl alcohol*
 - Ethyl ether*
 - Tribromoacetamide*
- Trichloroacetic acid**
 - Absorption spectra, **5**: 331, 335
 - Compressibility, aqueous solution, **3**: 440
 - Decomposition, kinetics of, **7**: 122
 - Density, aqueous solution, **3**: 111, 113; **7**: 67
 - Dielectric constant, **6**: 84
 - Diffusion in methyl alcohol, **5**: 72
 - Electrical conductivity, **6**: 143
 - Aqueous solution, **6**: 261
 - Esterification constant, **7**: 138
 - Freezing point lowering of aqueous solution, **4**: 262
 - Heat of combustion, **5**: 168
 - Heat of fusion, **5**: 132
 - Heat of solution in water, **5**: 148, 159
 - Hydrolysis, photochemical, **7**: 165
 - Refractive index, aqueous solution, **7**: 67
 - Specific heat, **5**: 101
 - Aqueous solution, **5**: 124
 - Surface tension, **4**: 448
 - Aqueous solution, **4**: 467
 - Thermal conductivity, aqueous solution, **5**: 227
 - Verdet constant, **6**: 428
 - Viscosity
 - Aqueous solution, **5**: 20
 - Liquid, **5**: 35; **7**: 213
 - Acetic acid*
 - Acetone*
 - Acetophenone*
 - Ammonium chloroacetate*
 - Ammonium dichloroacetate*
 - Ammonium formate*
 - Ammonium trichloroacetate*
 - Amylene*
 - β -Amylene*
 - Anisaldehyde*
 - Benzaldehyde*
 - Benzene*
 - Benzil*
 - Benzoic acid*
 - Benzophenone*
 - Benzoquinone*
 - Benzyl benzoate*
 - Calcium carbonate*-Potassium oxalate
 - Chloroacetic acid*
 - Chloroform*
 - Cinnamic acid*
 - Cresol (o-, m-, p-)*
 - Crotonic acid*
 - Dibenzalacetone*
 - Dichloroacetic acid*

Trichloroacetic acid.—(Continued)

- Diethyl oxalate*
- Diethyl succinate*
- Dimethyl malonate*
- Dimethyl oxalate*
- Dimethyl succinate*
- Dimethyl terephthalate*
- Dimethylpyrone*
- Ethyl acetate*
- Ethyl benzoate*
- Ethyl ether*
- Hydroxybenzaldehyde (o-, m-, p-)*
- Methyl anisate*
- Methyl benzoate*
- Methyl cinnamate*
- Methyl p-toluate*
- Naphthol (α -, β -)*
- Naphthyl acetate (α -, β -)*
- Nitrobenzaldehyde (o-, m-, p-)*
- Nitrophenol (o-, m-, p-)*
- Nitropiperonal*
- Phenol*
- Phenyl anisyl ketone*
- Phenyl benzoate*
- Phenyl salicylate*
- Phenylacetic acid*
- Piperonal*
- Potassium chloroacetate*
- Potassium dichloroacetate*
- Potassium formate*
- Potassium trichloroacetate*
- Salicylaldehyde*
- Sodium chloroacetate*
- Sodium dichloroacetate*
- Sodium formate*
- Sodium trichloroacetate*
- Sulfuric acid*
- Thymol*
- Toluic acid (o-, m-, p-)*
- Vanillin
 - Freezing point-solubility, **4**: 103
- Trichloroacrylic acid**
 - Freezing point lowering of aqueous solution, **4**: 262
 - Solubility in water, **4**: 251
- 2, 4, 6-Trichloroaniline**
 - Isoamyl acetate*
- Trichlorobenzene**
 - Magnetic susceptibility, **6**: 362
- 1, 2, 3-Trichlorobenzene**
 - 1, 2, 4-Trichlorobenzene
 - Freezing point-solubility, **4**: 167
 - 1, 3, 5-Trichlorobenzene
 - Freezing point-solubility, **4**: 167
- 1, 2, 4-Trichlorobenzene**
 - 1, 2, 3-Trichlorobenzene*
- 1, 3, 4-Trichlorobenzene**
 - Diethylamine*
- 1, 3, 5-Trichlorobenzene**
 - Azeotropic mixtures, **3**: 322
 - Cryoscopic constant, **4**: 183
 - Acetonitrile*
 - Methyl alcohol*
 - 1, 2, 3-Trichlorobenzene*
- Trichlorobutyric acid**
 - Density, aqueous solution, **3**: 114
 - Electrical conductivity, aqueous solution, **6**: 266
 - Freezing point lowering of aqueous solution, **4**: 262
 - Viscosity, aqueous solution, **5**: 20
 - Amylene*
 - Benzene*
 - Dimethylpyrone*
 - Nitrogen tetroxide*
- Trichloroethane**, specific heat, **5**: 107
- 1, 1, 1-Trichloroethane**
 - Boiling point, **3**: 216
 - Refractive index, **7**: 34
 - Vapor pressure, **3**: 216
 - Verdet constant, **6**: 428

* Data for system will be found under this compound in Index. Full explanation on page vii.

1, 1, 2-Trichloroethane

Azeotropic mixtures, **3**: 319
 Birefringence, electric, **7**: 110
 Boiling point, **3**: 216
 Surface tension, **4**: 448
 Vapor pressure, **3**: 216
 Verdet constant, **6**: 428

1, 2, 2-Trichloroethane

Refractive index, **7**: 34

Trichloroethylene

Absorption spectra, **5**: 331
 Azeotropic mixtures, **3**: 319, 323
 Birefringence, electric, **7**: 110
 Boiling point, **3**: 216
 Dielectric constant, **6**: 84
 Heat of vaporization, **5**: 136
 Solidification point, **1**: 61
 Specific heat, **5**: 107
 Vapor pressure, **3**: 216
 Viscosity, **5**: 35; **7**: 213
 -Acetone*
 -Chloroform*
 -Cyclohexane*
 -Iodine*
 -Pentachloroethane*
 -Phenol*
 -Sulfur*
 -Tetrahydronaphthalene*

Trichlorofluorene

-Quinoline*

Trichlorohydroquinol

Heat of combustion, **5**: 169

Trichlorolactamide

Boiling point elevation in aqueous solution, **3**: 327
 -Acetone*
 -Benzene*
 -Chloroform*
 -Ethyl alcohol*
 -Ethyl ether*

Trichlorolactic acid

Electrical conductivity, aqueous solution, **6**: 263
 Solubility in water, **4**: 253
 -Dimethylpyrone*
 -Hydrogen chloride*
 -Sulfuric acid*

Trichloronitromethane

Magnetic susceptibility, **6**: 361
 Refractive index, **7**: 34
 -Iodine*-Potassium iodide

2, 4, 6-Trichlorophenol

Absorption spectra, **5**: 338
 Diffusion into methyl alcohol, **5**: 72
 Electrical conductivity, aqueous solution, **6**: 271
 Surface tension, **4**: 453
 -Tribromophenol*

1, 2, 3-Trichloropropane

Azeotropic mixtures, **3**: 320
 Dielectric constant, **6**: 85
 Diffusion in benzene, **5**: 74
 Diffusion in methyl alcohol, **5**: 72
 Verdet constant, **6**: 428

Trichloroquinone

Absorption spectra, **5**: 338
 Heat of combustion, **5**: 169

Tridecane

Compressibility, **3**: 37
 Density, **3**: 30, 34
 Specific heat, **5**: 113
 Viscosity, **7**: 221

 β -Tridecyl esters

Optical rotatory power, **7**: 361

Tridecylene, specific heat, 5: 113**Tridecylic acid**

"Surface vapor pressure," **4**: 476

Tridymite

Crystallography, **4**: 20
 Density, **1**: 112; **2**: 82; **4**: 20
 Melting point, **1**: 112

Tridymite.—(Continued)

Optical constant, **6**: 341
 Refractive index, **1**: 112, 168
 Thermal expansion, **4**: 21
 Volume change on inversion, **4**: 21
 See also Silica.

Triethyl aconitate

Dielectric absorption, **6**: 96
 Dielectric constant, **6**: 96
 Refractive index, **7**: 58
 Surface tension, **4**: 461
 Viscosity, **7**: 221

Triethyl citrate

Magnetic susceptibility, **6**: 363
 Refractive index, **7**: 58
 Saponification constant, **7**: 135

Triethyl 1, 1, 2-ethanetricarboxylate

Dielectric absorption, **6**: 96
 Dielectric constant, **6**: 96

Triethyl isoaconitate

Dielectric absorption, **6**: 96
 Dielectric constant, **6**: 96

Triethyl phosphate

Magnetic susceptibility, **6**: 362
 Refractive index, **7**: 40
 Surface tension, **4**: 455
 -Ethyl alcohol*

Triethyl phosphite

Magnetic susceptibility, **6**: 362

Triethyl triazinetricarbonate

Magnetic susceptibility, **6**: 363

Triethylaluminum

Refractive index, **1**: 137, 165
 Boiling point, **1**: 137, 164

Triethylamine

Absorption spectra, **5**: 332, 340
 Critical point data, **3**: 243, 249
 Dielectric constant, **6**: 82, 91
 Electrical conductivity, aqueous solution, **6**: 277
 Heat of combustion, **5**: 168
 Heat of solution in water, **5**: 150
 Orthobaric density, **3**: 243
 Refractive index
 Aqueous solution, **7**: 69
 Liquid, **7**: 40
 Solubility in non-aqueous liquids, **3**: 269
 Solubility in water, **3**: 390
 Pressure, effect of, **3**: 393
 Surface tension, **4**: 455
 Aqueous solution, **4**: 469
 Thermal conductivity, gas, **5**: 214
 Vapor pressure, aqueous solution, **3**: 366
 Viscosity, aqueous solution, **5**: 20
 -Acetic acid*
 -Amyl alcohol*
 -Chloroform*
 -Ethyl alcohol*
 -Ethyl ether*
 -Hexylamine*
 -Phenol*
 -Toluene*
 -Xylene
 Distribution coefficients in water, **3**: 429

Triethylammonium bromide

Boiling point elevation in aqueous solution, **3**: 327
 -Acetic acid*
 -Chloroform*
 -Dichloromethane*
 -Ethyl alcohol*
 -Isoamyl alcohol*

Triethylammonium chloride

Absorption spectra, **5**: 340
 Boiling point elevation in aqueous solution, **3**: 327
 Density, aqueous solution, **3**: 62, 114
 Electrical conductivity, aqueous solution, **6**: 232
 Heat of solution in water, **5**: 150

Triethylammonium chloride.—(Continued)

Pyroelectric effect, **6**: 209
 Vapor pressure lowering in aqueous solution, **3**: 293
 Viscosity, aqueous solution, **5**: 13
 -Chloroform*
 -Dichloromethane*
 -Ethyl alcohol*
 -Hydrogen sulfide*
 -Pyridine*
 -Sulfur dioxide*

Triethylammonium iodide

Boiling point elevation in aqueous solution, **3**: 327
 -Acetic acid*
 -Chloroform*
 -Ethyl alcohol*
 -Isoamyl alcohol*

Triethylammonium nitrate

-Dichloromethane*

1, 3, 5-Triethylbenzene

Azeotropic mixtures, **3**: 322

Triethylcarbinol

Heat of combustion, **5**: 164

Triethyllead hydroxide, electrical conductivity, aqueous solution, 6: 277**Triethylphosphine**

Magnetic susceptibility, **6**: 362

Triethylphosphine oxide

Magnetic susceptibility, **6**: 362

Triethylphosphine sulfide

Crystallography, **1**: 326
 -Triphenylphosphine sulfide
 Freezing point-solubility, **4**: 144

Triethylsuccinic acid

Heat of combustion, **5**: 166

Triethylsuccinic anhydride

Heat of combustion, **5**: 166

Triethylsulfonium bromide

Decomposition, kinetics of, **7**: 125
 -Chloroform*

Triethylsulfonium chloride

-Chloroform*

Triethylsulfonium hydroxide, electrical conductivity, aqueous solution, 6: 277**Triethylsulfonium iodide**

Absorption spectra, **5**: 332, 340
 Heat of solution in water, **5**: 150
 -Acetone*
 -Chloroform*
 -Ethyl alcohol*
 -Methyl alcohol*

Triethyltin

-Ethyl ether*

Triethyltin hydroxide, electrical conductivity, aqueous solution, 6: 277**Trifluorocresol**

Magnetic susceptibility, **6**: 362

Trifolanol, optical rotatory power, 7: 463**Triformin, surface tension, 4: 454****Trigonite**

Density, **1**: 128
 Refractive index, **1**: 128, 173

Trihydroxyglutaric acid

Electrical conductivity, aqueous solution, **6**: 270
 Heat of combustion, **5**: 165
 Optical rotatory power, **7**: 387

Triiodide ion

Dissociation constant, **7**: 235
 Free energy, **7**: 235

Triisoamylamine

Absorption spectra, **5**: 334
 Heat of combustion, **5**: 168
 Magnetic susceptibility, **6**: 364
 Surface tension, **4**: 462

Triisoamylammonium picrate

-Chloroform*

Triisoamylammonium thiocyanate

Surface tension, **4**: 462

Triisobutylamine

Electrical conductivity, aqueous solution, **6**: 300
Heat of combustion, **5**: 168
Magnetic susceptibility, **6**: 363
Refractive index, **7**: 59
Surface tension, **4**: 461

Triisobutylene, heat of combustion, **5**: 164**Trilaurin**, surface tension, **4**: 463**Trimerite**, refractive index, **7**: 23**Trimesic acid**

Electrical conductivity, aqueous solution, **6**: 289
Heat of combustion, **5**: 165

Trimethyl borate

Azeotropic mixtures, **3**: 319
Dielectric constant, **6**: 86
Electrical conductivity, **6**: 142

Trimethyl boride, density, gas, **3**: 3**Trimethylacetic acid**

Electrical conductivity, aqueous solution, **6**: 270
Heat of solution in water, **5**: 149

Trimethylaluminum

Boiling point, **1**: 137, 164
Refractive index, **1**: 137, 165

Trimethylamine

Absorption spectra, **5**: 336
Critical point data, **3**: 248
Density, **3**: 3
Aqueous solution, **3**: 114
Dielectric constant, **6**: 86
Electrical conductivity, **6**: 143
Aqueous solution, **6**: 265
Heat of combustion, **5**: 167
Heat of formation, **5**: 182
Heat of solution in water, **5**: 148
Solubility in non-aqueous liquids, **3**: 269
Surface tension, **4**: 442, 450
Thermal conductivity, **5**: 214
Viscosity, **7**: 215
Liquid, **7**: 218
-Acetic acid*
-Benzene*
-Chloroform*
-Ethyl ether*
-Formic acid*
-Toluene*
-Xylene
Distribution coefficients in water, **3**: 426

Trimethylammonium bromide

Crystallography, **1**: 324

Trimethylammonium chloride

Density, aqueous solution, **3**: 112, 114
Electrical conductivity, aqueous solution, **6**: 232
Heat of solution in water, **5**: 148
Vapor pressure lowering in aqueous solution, **3**: 293
Viscosity, aqueous solution, **5**: 13
-Bromine*
-Sulfur dioxide*

Trimethylammonium chloroplatinate

Density, **1**: 126
Melting point, **1**: 126
Refractive index, **1**: 126, 165
-Ethyl alcohol*

Trimethylammonium hydroxide

Viscosity, aqueous solution, **5**: 13

Trimethylammonium iodide

Crystallography, **1**: 324

2, 4, 6-Trimethylaniline

-Acetic acid*

1, 2, 4-Trimethylbenzene

-Benzene*
-Ethyl propionate*
-Ethylbenzene*
-Isopentane*

1, 2, 4-Trimethylbenzene.—(Continued)

-Propyl acetate*

-Toluene*

2, 2, 3-Trimethylbutane

Heat of combustion, **5**: 163

Trimethylcarbinol

Boiling point, aqueous solutions, **3**: 311
Density, aqueous solution, **3**: 112, 113, 114; **7**: 68
Diffusion of vapor in air, **5**: 62
Heat of combustion, **5**: 164
Heat of solution in water, **5**: 149
Melting point under pressure, **4**: 10
Refractive index
Aqueous solution, **7**: 68
Liquid, **7**: 36
Specific heat, solid, **5**: 102
Verdet constant, **6**: 428
Viscosity, gas, **5**: 3
Volume change on melting, **4**: 10
-p-Bromotoluene*
-Catechol*
-2, 4-Dinitrophenol*
-Hydroquinol*
-Naphthalene*
-Naphthol (α -, β -)*
-Naphthylamine (α -, β -)*
-Nitrophenol (o-, m-, p-)*
-Phenol*
-Phenylenediamine (o-, m-)*
-Pyrogallol*
-Resorcinol*
-Thymol*
-p-Toluidine*
-p-Xylene
Freezing point-solubility, **4**: 116

Trimethylcolchicinic acid

-Acetic acid*

-Acetone*

Trimethylcyclohexanes

Heat of combustion, **5**: 163
Refractive index, **7**: 48

Trimethylcyclohexanols

Refractive index, **7**: 49

Trimethylcyclohexenes

Refractive index, **7**: 48

1, 3, 5-Trimethylcyclohex-6-en-5-ol

Heat of combustion, **5**: 164
Refractive index, **7**: 48

1, 2, 4-Trimethylcyclopentane

Heat of combustion, **5**: 163

Trimethylene

Heat of combustion, **5**: 163
Rearrangement, kinetics of, **7**: 116
Refractive index, **7**: 35

Trimethylene nitrile

Heat of combustion, **5**: 167

Trimethylenecarboxylic acid

Absorption spectra, **5**: 337
Heat of combustion, **5**: 165
Refractive index, **7**: 36
Viscosity, **7**: 215

Trimethylenediamine

Electrical conductivity, aqueous solution, **6**: 265
Viscosity, **7**: 215

Trimethylenedicarboxylic acids

Heat of combustion, **5**: 165

Trimethyleneglycol

X-rays, absorption coefficient, **6**: 14
-Glycerol*

α -, α -, β -, β -Trimethylenetetracarboxylic acid, heat of combustion, **5**: 165

Trimethylenetrinitroamine

Refractive index, **7**: 29

Trimethylethylene

Absorption spectra, **5**: 338, 364
Heat of combustion, **5**: 163
Magnetic susceptibility, **6**: 362
Surface tension, **4**: 436, 452

Trimethylglutaric acid

-Ethyl ether*

2, 2, 3-Trimethylpentane

Dielectric constant, **6**: 94

2, 2, 4-Trimethylpentane

Heat of combustion, **5**: 163

Trimethylphenylammonium iodide

-Iodine*

2, 3, 4-Trimethylpyridine

-Toluene*

2, 4, 6-Trimethylpyridine

Electrical conductivity, aqueous solution, **6**: 287
Solubility in water, **3**: 392
Pressure, effect of, **3**: 393
Vapor pressure, aqueous solution, **3**: 366

Trimethylpyrogallol

Verdet constant, **6**: 430

Trimethylrosaniline

Diffusion in ethyl alcohol, **5**: 74

Trimethylstannic iodide

-Aniline*

Trimethylsuccinic acid

Crystallography, **1**: 327
Electrical conductivity, aqueous solution, **6**: 283
Heat of combustion, **5**: 165
Optical rotatory power, **7**: 404

Trimethylsuccinic anhydride

Heat of combustion, **5**: 166

Trimethylsulfanilic acid

Density, aqueous solution, **3**: 115
Dielectric constant, **6**: 94
Viscosity, aqueous solution, **5**: 21
-Acetic acid*

Trimethylsulfonium acetate

Density, aqueous solution, **3**: 61

Trimethylsulfonium bromide

Density, aqueous solution, **3**: 61

Trimethylsulfonium chloride

Density, aqueous solution, **3**: 61

Trimethylsulfonium hydroxide, electrical conductivity, aqueous solution, **6**: 265,

Trimethylsulfonium iodide

Density, aqueous solution, **3**: 61
-Sulfur dioxide*

Trimethylsulfonium nitrate

Density, aqueous solution, **3**: 63

Trimethyltellurium hydroxide, electrical conductivity, aqueous solution, **6**: 265

Trimethyltin hydroxide, electrical conductivity, aqueous solution, **6**: 265

Trimethyltoluylammonium iodide

-Iodine*

Trinitroanisole

Absorption spectra, **5**: 341
Explosive, properties as, **7**: 491
-Formic acid*
-Picryl sulfide*

Trinitrobenzene

Detonation velocity, **7**: 493
Explosive, properties as, **7**: 490
Heat of explosion, **7**: 490
-Ethyl alcohol*

1, 2, 4-Trinitrobenzene

Heat of combustion, **5**: 167

1, 3, 4-Trinitrobenzene

-Camphor*

1, 3, 5-Trinitrobenzene

Absorption spectra, **5**: 338
Dielectric constant, **6**: 89
Heat of combustion, **5**: 167
Magnetic susceptibility, **6**: 362
Viscosity, **7**: 217
-Acenaphthene*
-Aniline*
-Anthracene*
-Camphor*
-Carbazole*
-Coumarin*

* Data for system will be found under this compound in Index. Full explanation on page vii.

1, 3, 5-Trinitrobenzene.—(Continued)

- Dimethylpyrone*
- Dinitrobenzene (o-, m-)*
- Diphenylamine*
- γ , γ -Dipyridyl*
- Fluorene*
- Fluorenone*
- Formic acid*
- Hydroquinol*
- Naphthalene*
- Naphthylamine (α -, β -)*
- Nitroaniline (m-, p-)*
- Phenanthrene*
- Phenyl ether*
- Phenylenediamine (o-, m-, p-)*
- Picric acid*
- Retene*
- Styphnic acid*
- Tetryl*
- Tribromophenol*
- Trinitrotoluene

Freezing point-solubility, 4: 175

-Triphenylcarbinol

Freezing point-solubility, 4: 119

-Xanthone

Freezing point-solubility, 4: 119

2, 4, 6-Trinitrobenzoic acid

Crystallography, 1: 327

-Ethyl ether***Trinitrochlorobenzene**

Detonation velocity, 7: 493

Explosive, properties as, 7: 491

Trinitrocresol

Detonation velocity, 7: 493

Electrical conductivity, aqueous solution, 6: 279

Explosive, properties as, 7: 490

-Naphthalene***Trinitroglycerol**

Heat of combustion, 5: 167

Heat of fusion, 5: 132

-Acetone***Trinitromesitylene****-Formic acid*****Trinitromethane**, electrical conductivity, aqueous solution, 6: 261**Trinitronaphthalene****-Glycol diacetate*****1, 2, 5-Trinitronaphthalene****-1, 3, 5-Trinitronaphthalene**

Freezing point-solubility, 4: 154, 170

-1, 3, 8-Trinitronaphthalene

Freezing point-solubility, 4: 154, 170

-1, 4, 5-Trinitronaphthalene

Freezing point-solubility, 4: 154

1, 3, 5-Trinitronaphthalene

Crystallography, 1: 329

-1, 5-Dinitronaphthalene***-1, 5-Dinitronaphthalene*-1, 8-Dinitronaphthalene****-1, 8-Dinitronaphthalene*****-1, 2, 5-Trinitronaphthalene*****-1, 3, 8-Trinitronaphthalene**

Freezing point-solubility, 4: 154

-1, 4, 5-Trinitronaphthalene

Freezing point-solubility, 4: 155

1, 3, 8-Trinitronaphthalene**-1, 5-Dinitronaphthalene*****-1, 5-Dinitronaphthalene*-1, 8-Dinitronaphthalene****-1, 8-Dinitronaphthalene*****-1, 2, 5-Trinitronaphthalene*****-1, 3, 5-Trinitronaphthalene*****-1, 4, 5-Trinitronaphthalene**

Freezing point-solubility, 4: 155

1, 4, 5-Trinitronaphthalene**-1, 2, 5-Trinitronaphthalene*****-1, 3, 5-Trinitronaphthalene*****-1, 3, 8-Trinitronaphthalene*****2, 4, 5-Trinitrophenol**

Birefringence, electric, 7: 111

Detonation velocity, 7: 493

Diffusion in benzene, 5: 74

Diffusion in methyl alcohol, 5: 72

Electrical conductivity, aqueous solution, 6: 271

Heat of combustion, 5: 167

Trinitrophenylmethyl nitroamine. See Tetryl.**Trinitrotoluene**

Detonation velocity, 7: 493

Explosive, properties as, 7: 490

Heat of explosion, 7: 490

Vapor pressure, 3: 222

-Aniline***-Benzene*****-Benzene*-Naphthalene****-Chloroform*****-Ethyl alcohol*****-Glycol diacetate*****-Phenylenediamine (o-, m-, p-)*****-Picric acid*****-Sulfuric acid*****-1, 3, 5-Trinitrobenzene*****2, 3, 4-Trinitrotoluene**

Heat of combustion, 5: 168

2, 3, 5-Trinitrotoluene

Heat of combustion, 5: 168

2, 4, 5-Trinitrotoluene**-2, 4, 6-Trinitrotoluene**

Freezing point-solubility, 4: 178

2, 4, 6-Trinitrotoluene

Cryoscopic constant, 4: 183

Heat of combustion, 5: 168

Heat of fusion, 5: 133

Solubility in water, 4: 252

Specific heat

Liquid, 5: 110

Solid, 5: 104

-Acenaphthene***-Acetonitrile*****-p-Aminoacetophenone*****-p-Aminoazobenzene****-Anthracene*****-Camphor*****-Carbazole*****-Cinnamylideneacetophenone*****-Dimethylpyrone*****-Dinitrobenzene (o-, m-)*****-2, 4-Dinitrotoluene*****-2, 4-Dinitrotoluene*-p-Nitrotoluene****-2, 6-Dinitrotoluene*****-Diphenylamine*****-Fluorene*****-Hexanitrodiphenylamine*****-m-Hydroxybenzaldehyde*****-Naphthalene*****-Nitrotoluene (o-, p-)*****-o-Nitrotoluene*-p-Nitrotoluene****-Phenanthrene*****-Picryl sulfide*****-Retene*****-Styphnic acid*****-Tetryl*****-2, 4, 5-Trinitrotoluene*****-Triphenylcarbinol**

Freezing point-solubility, 4: 146

3, 4, 5-Trinitrotoluene

Heat of combustion, 5: 168

3, 4, 6-Trinitrotoluene

Heat of combustion, 5: 168

Trinitroxylene, specific heat, 5: 104**2, 4, 6-Trinitro-m-xylene****-Glycol diacetate*****-Styphnic acid*****Trinitro-p-xylene****-Acetonitrile*****-Methyl alcohol*****Triodes**, 6: 58**Triolein**

Surface tension, 4: 463

-Tripalmitin

Freezing point-solubility, 4: 167

Refractive index, 7: 91

-Tripalmitin-Tristearin

Freezing point-solubility, 4: 172

Refractive index, 7: 97

-Tristearin

Freezing point-solubility, 4: 167

Refractive index, 7: 91

Trional**-Carbon disulfide*****-Sulfur trioxide*****-Thionyl chloride*****Tripalmitin**

Surface tension, 4: 463

-Acetone***-Benzene*****-Chloroform*****-Palmitic acid*****-Palmitic acid*-Stearic acid****-Palmitic acid*-Tristearin****-Stearic acid*****-Stearic acid*-Tristearin****-Triolein*****-Triolein*-Tristearin****-Tristearin**

Freezing point-solubility, 4: 167

Refractive index, 7: 91

Triphenoxyarsine

Magnetic susceptibility, 6: 364

Triphenyl phosphate

Absorption spectra, 5: 353

Surface tension, 4: 462

Viscosity, 7: 222

-Methyldiphenoxyphosphine oxide***-Triphenyl thiophosphate**

Freezing point-solubility, 4: 166

-Triphenylphosphine oxide

Freezing point-solubility, 4: 166

Triphenyl phosphite

Magnetic susceptibility, 6: 364

Triphenyl thiophosphate**-Triphenyl phosphate*****-Triphenylphosphine sulfide**

Freezing point-solubility, 4: 166

Triphenylamine

Absorption spectra, 5: 334, 353

Heat of combustion, 5: 168

Viscosity, 7: 222

-Triphenylarsine

Freezing point-solubility, 4: 166

-Triphenylphosphine

Freezing point-solubility, 4: 166

Triphenylarsine

Magnetic susceptibility, 6: 364

-Triphenylamine***-Triphenylbismuthine**

Freezing point-solubility, 4: 165

-Triphenylphosphine

Freezing point-solubility, 4: 166

-Triphenylstibine

Freezing point-solubility, 4: 166

Triphenylarsine dihydroxide

Magnetic susceptibility, 6: 364

Triphenylarsine oxide

Magnetic susceptibility, 6: 364

-Triphenylarsine sulfide

Freezing point-solubility, 4: 166

-Triphenylphosphine oxide

Freezing point-solubility, 4: 166

-Triphenylstibine sulfide

Freezing point-solubility, 4: 166

Triphenylarsine sulfide**-Triphenylarsine oxide*****-Triphenylphosphine oxide**

Freezing point-solubility, 4: 166

-Triphenylphosphine sulfide

Freezing point-solubility, 4: 166

* Data for system will be found under this compound in Index. Full explanation on page vii.

Triphenylarsine sulfide.—(Continued)

- Triphenylstibine sulfide
- Freezing point-solubility, **4**: 166
- 1, 3, 5-Triphenylbenzene**
- Crystallography, **1**: 337
- Heat of combustion, **5**: 164
- Triphenylbismuth dichloride**
- Refractive index, **7**: 30
- Triphenylbismuthine**
- Magnetic susceptibility, **6**: 364
- Mercury diphenyl*
- Triphenylarsine*
- Triphenylphosphine
- Freezing point-solubility, **4**: 166
- Triphenylbismuthine dinitrate**
- Magnetic susceptibility, **6**: 364
- Triphenylcarbinol**
- Absorption spectra, **5**: 353
- Heat of combustion, **5**: 164
- Magnetic susceptibility, **6**: 364
- Surface tension, **4**: 462
- Acetonitrile*
- Benzene*
- Catechol*
- Dinitrobenzene (o-, m-, p-)*
- 2, 4-Dinitrotoluene*
- Hydroquinol*
- Isoamyl acetate*
- Naphthalene*
- Naphthol (α -, β -)*
- Naphthylamine (α -, β -)*
- Nitrophenol (o-, m-, p-)*
- Phenol*
- Phenylenediamine (m-, p-)*
- Picric acid*
- Pyrogallol*
- Quinoline*
- Quinone*
- Resorcinol*
- p-Toluidine*
- 1, 3, 5-Trinitrobenzene*
- 2, 4, 6-Trinitrotoluene*
- Triphenylmethane
- Freezing point-solubility, **4**: 181
- Triphenylguanidine**
- Absorption spectra, **5**: 353
- Crystallization velocity, **5**: 61
- Crystallography, **1**: 335
- Transition velocity, **5**: 61
- Acetamide*
- Ethyl alcohol*
- Phthalide*
- Triphenylmethane
- Freezing point-solubility, **4**: 166
- Triphenylmethane**
- Absorption spectra, **5**: 353
- Cryoscopic constant, **4**: 184
- Crystallization velocity, **5**: 61
- Diffusion in methyl alcohol, **5**: 73
- Heat of combustion, **5**: 164
- Heat of fusion, **5**: 134
- Magnetic susceptibility, **6**: 364
- Melting point under pressure, **4**: 10
- Photoluminescence, **5**: 387
- Specific heat, **5**: 105
- Surface tension, **4**: 462
- Verdet constant, **6**: 431
- Viscosity, **5**: 28; **7**: 222
- Acetonitrile*
- Aniline*
- Anisole*
- Antimony tribromide*
- Antimony trichloride*
- Benzene*
- Benzil*-Chloroform
- Catechol*
- Chloroform*
- Cyclohexane*
- Ethyl acetate*
- Ethyl alcohol*
- Ethyl ether*

Triphenylmethane.—(Continued)

- Ethylene bromide*
- Hexane*
- Hydroquinol*
- Methyl alcohol*
- Methyl thiocyanate*
- Naphthalene*
- Naphthol (α -, β -)*
- Naphthylamine (α -, β -)*
- Nitrobenzene*
- Nitromethane*
- Nitrophenol (o-, m-, p-)*
- Phenetole*
- Phenol*
- Phenylenediamine (o-, m-, p-)*
- Picric acid*
- Pyridine*
- Pyrogallol*
- Pyrrole*
- Quinoline*
- Quinone*
- Resorcinol*
- Styphnic acid*
- Sulfur dioxide*
- Thiophene*
- Toluene*
- p-Toluidine*
- Triphenylcarbinol*
- Triphenylguanidine*
- Triphenylmethane dyes**
- Absorption spectra, **7**: 184
- Triphenylmethyl**
- Heat of combustion, **5**: 164
- Benzene*
- Triphenylphosphine**
- Absorption spectra, **5**: 353
- Magnetic susceptibility, **6**: 364
- Surface tension, **4**: 462
- Viscosity, **7**: 222
- Triphenylamine*
- Triphenylarsine*
- Triphenylbismuthine*
- Triphenylphosphine oxide**
- Triphenyl phosphate*
- Triphenylarsine sulfide*
- Triphenylphosphine sulfide
- Freezing point-solubility, **4**: 166
- Triphenylstibine sulfide
- Freezing point-solubility, **4**: 166
- Triphenylphosphine sulfide**
- Triethylphosphine sulfide*
- Triphenyl thiophosphate*
- Triphenylarsine oxide*
- Triphenylarsine sulfide*
- Triphenylphosphine oxide*
- Triphenylphosphine sulfide**
- Triphenylstibine sulfide
- Freezing point-solubility, **4**: 166
- Triphenylstibine**
- Magnetic susceptibility, **6**: 364
- Surface tension, **4**: 462
- Viscosity, **7**: 222
- Mercuric diphenyl*
- Tetraphenyltin*
- Triphenylarsine*
- Triphenylstibine dihydroxide**
- Magnetic susceptibility, **6**: 364
- Triphenylstibine sulfide**
- Triphenylarsine oxide*
- Triphenylarsine sulfide*
- Triphenylphosphine oxide*
- Triphenylphosphine sulfide*
- Triphenylsulfanilic acid**
- Hydrogen chloride*
- Triphenyltin iodide**, density, **3**: 44
- Triphylite**
- Density, **1**: 150
- Refractive index, **1**: 150, 172
- Triple points**, **3**: 199, 351; **4**: 6, 9
- Tripoli**, weights and measures, **1**: 12
- Tripoli flour**, rubber, effect on, **2**: 287

Tripolite. See Diatomaceous earth.

- Tripropylamine**
- Absorption spectra, **5**: 333, 345
- Density, **3**: 30
- Electrical conductivity, aqueous solution, **6**: 293
- Refractive index, **7**: 49
- Surface tension, **4**: 459
- Chloroform*
- Toluene*
- Tripropylammonium bromide**
- Acetone*
- Tripropylammonium chloride**
- Electrical conductivity, aqueous solution, **6**: 232
- Acetone*
- Tripuhyte**
- Density, **1**: 129
- Refractive index, **1**: 129, 173
- Triquinoyl**, magnetic susceptibility, **6**: 362
- Trisilicane**, vapor pressure, **3**: 214
- Trisilicon octachloride**
- Vapor pressure, **3**: 214
- Tristearin**
- Cryoscopic constant, **4**: 184
- Crystallization velocity, **5**: 61
- Electrical conductivity, **6**: 145
- Heat of fusion, **5**: 134
- Surface tension, **4**: 463
- Acetone*
- Benzene*
- d-Bromocamphor*
- Chloroform*
- Naphthalene*
- Palmitic acid*
- Palmitic acid*-Stearic acid
- Palmitic acid*-Tripalmitin
- Stearic acid*
- Stearic acid*-Tripalmitin
- Triolein*
- Triolein*-Tripalmitin
- Tripalmitin*
- Trisulfimide**, electrical conductivity, aqueous solution, **6**: 260
- Trithionic acid**, heat of formation, **5**: 178
- Troegerite**
- Density, **1**: 134
- Refractive index, **1**: 134, 171
- Troilite**
- Density, **1**: 128
- Melting point, **1**: 128
- See also Ferrous sulfide.
- Trojan steel**, **2**: 385; cf. 472, 510
- Tronite**
- Density, **1**: 151
- Refractive index, **1**: 151, 169
- Troostite**, thermal conductivity, **5**: 231
- Tropic acid**
- Absorption spectra, **5**: 345, 365, 367
- Electrical conductivity, aqueous solution, **6**: 288, 291
- Optical rotatory power, **7**: 404, 409
- Tropine**
- Absorption spectra, ultra-violet, **5**: 369
- Electrical conductivity, aqueous solution, **6**: 288
- Refractive index, **7**: 45
- Tropinone**
- Absorption spectra, ultra-violet, **5**: 369
- Trouton's ratio**, **5**: 136
- Truxillanilidic acid**
- Optical rotatory power, **7**: 418
- α -**Truxillic acid**
- Absorption spectra, **5**: 353
- Electrical conductivity, aqueous solution, **6**: 301
- Heat of combustion, **5**: 166
- Trypsin**, **7**: 156
- Tryptophane**
- Absorption spectra, **5**: 347, 368, 373
- Optical rotatory power, **7**: 376

* Data for system will be found under this compound in Index. Full explanation on page vii.

Tschemmigite

- Density, **1**: 137
 Melting point, **1**: 137
 Refractive index, **1**: 137, 165

Tsumebite

- Density, **1**: 123
 Refractive index, **1**: 123, 173

Tube brass, 2: 385; *cf.* 469, 555, 600, 602**Tuc-Tur (alloy), 2**: 385; *cf.* 475, 480**Tuff**

- Bulk density, **2**: 53
 Compressive strength, **2**: 48
 Elasticity, **2**: 52
 Hardness, **2**: 50
 Impact hardness, **2**: 51
 Porosity, **2**: 54
 Thermal conductivity, **2**: 55
 Thermal diffusivity, **2**: 56

Tungsten

- Accommodation coefficient, **5**: 53
 Absorption, index of, **5**: 250, 252
 Boiling point, **1**: 102; **3**: 205
 Brightness, **5**: 246
 Brightness temperature, **5**: 245
 Color temperature, **5**: 246
 Compressibility, **3**: 47, 49
 Single crystal, **3**: 49
 Contact potential, **6**: 57
 Density, **1**: 105; **2**: 456
 Elastic properties, **2**: 594
 Electrical conductivity, **1**: 105; **6**: 136, 137
 Low temperature, **6**: 129, 134
 Single crystal, **6**: 135
 Electrons, secondary emission of, **6**: 63
 Electrons, thermal emission of, **6**: 54, 55
 Electrons freed by X-rays, energy of, **6**: 5
 Emission, spectral, **5**: 242, 243, 254
 Emission spectra, **5**: 319
 Entropy, **5**: 89
 Evaporation from hot filament, **5**: 53
 Hall effect, **6**: 416
 Heat content, **5**: 89
 Heat of vaporization, **1**: 102
 Magnetic susceptibility, **6**: 356
 Melting point, **1**: 53, 105
 Nernst effect, **6**: 420
 Persistent lines, **5**: 324
 Photoelectric threshold, **6**: 68
 Photoelectric work function, **6**: 57
 Quantum numbers, **5**: 408
 Radiation temperature, total, **5**: 246
 Refraction, index of, **5**: 250, 252
 Righi-Leduc effect, **6**: 421
 Specific heat, **1**: 105; **5**: 86, 89, 94
 Spectral series, **5**: 406
 Tensile properties, **2**: 592
 Thermal conductivity, **5**: 220, 221
 Thermal expansion, **1**: 105; **2**: 462
 Thermionic work function, **6**: 54, 56
 Thermochemistry, **5**: 192
 Thermodynamic potential, **5**: 89
 Thermoelectric properties, **6**: 214, 225
 Thomson coefficient, **6**: 228
 Thoriated, emissions of electrons by, **6**: 55
 Vapor pressure, **3**: 205
 Viscosity, **5**: 7
 X-radiation from target of, **6**: 46
 X-ray absorption limits, **6**: 41
 X-ray crystal structure, **1**: 341
 X-ray emission spectra, **6**: 41
 X-ray lines, intensity of, **6**: 26
 X-ray lines, relative intensities, **6**: 32
 X-ray lines, width of, **6**: 26
 X-ray series, limiting frequencies, **6**: 35
 X-ray wave-lengths, standard, **6**: 34
 X-rays, absorption, discontinuity in, **6**: 12

Tungsten.—(Continued)

- X-rays, absorption coefficient, **6**: 13–15
 Zeeman effect, **5**: 420, 430
 -Carbon*
 -Carbon*-Iron
 -Carbon*-Iron-Manganese
 -Carbon*-Iron-Manganese-Silicon
 -Carbon*-Iron-Vanadium
 -Carbon*-Chromium
 -Carbon*-Chromium-Copper-Iron
 -Carbon*-Chromium-Iron
 -Carbon*-Chromium-Iron-Manganese-Silicon
 -Carbon*-Chromium-Iron-Molybdenum-Vanadium
 -Chromium*-Iron
 -Chromium*-Iron-Molybdenum
 -Cobalt*
 -Copper*-Tin
 -Graphite*
 -Iron*
 -Iron*-Nickel
 -Molybdenum*
 -Nickel*
 -Silicon*
 -Tungsten carbide
 Freezing point-solubility, **4**: 40
 Tungsten brass, **2**: 385
 Tungsten carbide
 Electrical conductivity, **6**: 154
 -Tungsten*
 Tungsten dioxide
 Heat of formation, **5**: 192
 Reduction with hydrogen, equilibrium constant, **7**: 288
 Tungsten hexachloride
 Electrical conductivity, **6**: 148
 Tungsten lamp
 Color temperature, **5**: 245
 Emission, spectral, **5**: 243
 Temperature, **5**: 247
 Tungsten oxide
 Specific heat, **5**: 98
 -Potassium tungstate*
 -Sodium tungstate*
 Tungsten pentachloride
 Electrical conductivity, **6**: 148
 Tungsten pentoxide
 Heat of formation, **5**: 192
 Hydrogen, reaction with, equilibrium constant, **7**: 288
 Tungsten steel, **2**: 385, 472
 Electrical conductivity, **6**: 189
 Heat treatment, effect of, **6**: 200
 Magnetic properties, **6**: 374, 386, 388
 Thermal conductivity, **5**: 219, 225
 Thermal expansion, **2**: 472
 Thermoelectric properties, **6**: 224
 Tungsten trioxide
 Density, aqueous solution, **3**: 70
 Heat of formation, **5**: 192
 Heat of vaporization, **7**: 288
 Hydrogen, reaction with, equilibrium constant, **7**: 288
 Magnetic susceptibility, **6**: 359
 Thermoelectric power, **6**: 224
 Tungstic acid
 Heat of formation, **5**: 192
 Magnetic susceptibility, **6**: 359
 Tungstite
 Density, **1**: 133
 Melting point, **1**: 133
 Refractive index, **1**: 133, 173
 Tuning forks, **6**: 454
 Magnetic field, effect of, **6**: 439
 Tunis, weights and measures, **1**: 13
 Turbadium bronze, **2**: 385; *cf.* 556
 Turbine brass, **2**: 385; *cf.* 555, 601
 Turbine material, **2**: 385; *cf.* 480, 601
 Turbiston's brass, **2**: 385, 556

Turicine

- Optical rotatory power, **7**: 409
 Turkestan, weights and measures, **1**: 13
 Turkey, weights and measures, **1**: 13
 Turpentine
 Absorption spectra, **5**: 334, 346
 Angle of contact, **4**: 434
 Electrical conductivity, **6**: 146
 Heat of vaporization, **5**: 138
 Sound, velocity of, in, **6**: 464
 Thermal conductivity, **5**: 228
 Verdet constant, **6**: 426
 Dispersion, **6**: 433
 Viscosity, **5**: 49
 X-rays, scattering coefficient, **6**: 17
 -Acetic acid*
 -Acetic acid*-Ethyl alcohol
 -Benzene*
 -Benzoic acid*
 -Camphene*
 -Camphoric acid*
 -Camphoroxime*
 -Carbon disulfide*
 -Dimethyl sulfate*
 -Ethyl alcohol*
 -Ethyl ether*
 -Petroleum*
 -Salicylic acid*
 -Toluene*

Turquoise

- Density, **1**: 137
 Refractive index, **1**: 137, 171
 Tutania (alloy), **2**: 385, 557
 Tutenag (alloy), **2**: 385

Tuxtlite

- Density, **1**: 154
 Refractive index, **1**: 154, 172

Twist

- Conversion factors, **1**: 23
 Definition, **1**: 42
 Two to one (alloy), **2**: 385; *cf.* 555, 602

Tychite

- Density, **1**: 153
 Refractive index, **1**: 153, 165

Type metal, 2: 385, 557**Typewriter metal, 2**: 385**Tyrolite**

- Density, **1**: 123
 Refractive index, **1**: 123, 172

Tyrosine

- Absorption spectra, **5**: 345, 373
 Electrical conductivity, aqueous solution, **6**: 292
 Heat of combustion, **5**: 168
 Optical rotatory power, **7**: 376

U.S.N. brass, 2: 385**U.S.N. bronze, 2**: 385, 567**Uchatius bronze, 2**: 385; *cf.* 559, 601**Ulcometal, 2**: 385; *cf.* 556**Ulcony (alloy), 2**: 385; *cf.* 567**Ulexite**

- Density, **1**: 154
 Refractive index, **1**: 154, 169

Ullmannite

- Density, **1**: 132
 Thermal expansion, **3**: 44
See also Nickel antimony sulfide.

Ultra capital steel, 2: 385; *cf.* 472**Umangite, density, 1**: 122**Umbellaric acid**

- Optical rotatory power, **7**: 418

Umbellonic acid

- Optical rotatory power, **7**: 417

Umbellulone

- Optical rotatory power, **7**: 415

Undecane

- Compressibility, **3**: 37
 Density, **3**: 30, 34
 Specific heat, **5**: 113
 Viscosity, **7**: 221

Undecolic acid, heat of combustion, **5**: 166
 β -Undecyl esters
 Optical rotatory power, **7**: 36a
 Viscosity, **7**: 221, 222
Undecylene, specific heat, **5**: 113
Undecylenic acid
 Heat of combustion, **5**: 166
 Surface tension, **4**: 437, 461
Undecylic acid
 Density, **3**: 45
 Heat of combustion, **5**: 166
 Heat of fusion, **5**: 134
 Viscosity, **7**: 221
Unieux iron, magnetic properties, **6**: 386
Union of South Africa
 Weights and measures, **1**: 13
United States of America
 Weights and measures, **1**: 13
Uraninite. See Uranium dioxide.
Uranium
 Compressibility, **3**: 49
 Density, **1**: 105; **2**: 456
 Electrical conductivity, **1**: 105; **6**: 136, 137
 Electrons, thermal emission of, **6**: 54
 Emission, spectral, **5**: 242
 Emission spectra, **5**: 317
 Magnetic susceptibility, **6**: 356
 Melting point, **1**: 105
 Persistent lines, **5**: 324
 Specific heat, **1**: 105; **5**: 94
 Thermionic work function, **6**: 54
 Thermochemistry, **5**: 192
 X-ray absorption limits, **6**: 42
 X-ray emission spectra, **6**: 42
 X-ray series, limiting frequencies, **6**: 35
 X-rays, absorption coefficient, **6**: 13-15
 -Carbon*-Chromium-Iron
 -Carbon*-Chromium-Iron-Nickel
 -Carbon*-Iron
 -Carbon*-Iron-Nickel
 -Titanium*
Uranium carbide, heat of formation, **5**: 192
Uranium dioxide
 Density, **1**: 134
 Heat of formation, **5**: 192
 Magnetic susceptibility, **6**: 359
 X-ray diffraction data, **1**: 343
Uranium hexafluoride
 Vapor pressure, **3**: 208
Uranium oxide
 Diffusion in tungsten, **6**: 56
 Evaporation from tungsten, **6**: 56
 Thermoelectric power, **6**: 224
Uranium peroxide
 Heat of formation, **5**: 192
Uranium series
 Members and constants, **1**: 363
Uranium steel, **2**: 385, 478, 479
Uranium tetrachloride
 Absorption spectra, solutions, **5**: 327
 Electrical conductivity, **6**: 148
 Magnetic susceptibility, **6**: 359
Uranium trioxide
 Heat of formation, **5**: 192
 Magnetic susceptibility, **6**: 359
Uranocircite
 Density, **1**: 148
 Refractive index, **1**: 148, 171
Uranophane
 Density, **1**: 145
 Refractive index, **1**: 145, 172
Uranopilite
 Density, **1**: 145
 Refractive index, **1**: 145, 171
Uranoso-uranic oxide
 Emission, spectral, **5**: 242
 Heat of formation, **5**: 192
 Magnetic susceptibility, **6**: 359
 Specific heat, **5**: 98
 X-rays, absorption coefficient, **6**: 13, 16

Uranospherite
 Density, **1**: 134
 Refractive index, **1**: 134, 173
Uranospinite
 Density, **1**: 145
 Refractive index, **1**: 145, 171
Uranothallite
 Density, **1**: 145
 Refractive index, **1**: 145, 169
Uranous sulfate
 Solubility in water, **4**: 226
 -Hydrogen chloride*
 -Sulfuric acid*
Uranus, characteristics of, **1**: 392
Uranyl acetate
 Electrical conductivity, aqueous solution, **6**: 245
 Density, aqueous solution, **3**: 70
 Freezing point lowering of aqueous solution, **4**: 257
 Heat of formation, **5**: 192
 Solubility in water, **4**: 226
Uranyl butyrate
 Solubility in water, **4**: 226
Uranyl chloride
 Density, aqueous solution, **3**: 105
 Electrical conductivity, aqueous solution, **6**: 233
 Freezing point lowering of aqueous solution, **4**: 257
 Heat of formation, **5**: 192
 Solubility in water, **4**: 226
Uranyl chromate
 Heat of formation, **5**: 193
Uranyl formate
 Solubility in water, **4**: 226
 -Methyl alcohol*
Uranyl isobutyrate
 Solubility in water, **4**: 226
Uranyl isovalerate
 Solubility in water, **4**: 226
Uranyl nitrate
 Dehydration behavior of hydrate, **7**: 288
 Density, **1**: 134
 Aqueous solution, **3**: 70; **7**: 71
 Diffusion in water, **5**: 66
 Electrical conductivity, aqueous solution, **6**: 238
 Freezing point lowering of aqueous solution, **4**: 257
 Heat of formation, **5**: 192
 Magnetic susceptibility, **6**: 359
 Photoluminescence, **5**: 387
 Refractive index, **1**: 134, 169
 Aqueous solution, **7**: 71
 Solubility in water, **4**: 226
 Vapor pressure lowering in aqueous solution, **3**: 294
 X-ray diffraction data, **1**: 343
 -Acetic acid*
 -Ethyl ether*
 -Hydrogen bromide*
 -Nitric acid*
 -Sulfuric acid*
Uranyl oxalate
 Solubility in water, **4**: 226
 -Ammonium oxalate*
 -Sodium oxalate*
Uranyl propionate
 Solubility in water, **4**: 226
Uranyl salts, luminescence, **5**: 389
Uranyl sulfate
 Decomposition pressure of hydrate, **7**: 288
 Electrical conductivity, aqueous solution, **6**: 236
 Freezing point lowering of aqueous solution, **4**: 257
 Heat of formation, **5**: 192
 Photoluminescence, **5**: 387

Uranyl sulfate.—(Continued)
 Solubility in water, **4**: 226
 -Sulfuric acid*
Uranyl tartrate, freezing point lowering of aqueous solution, **4**: 257
Uranyl thiocyanate, freezing point lowering of aqueous solution, **4**: 257
Urea
 Absorption spectra, **5**: 335, 364, 367, 370
 Allotropic forms, **4**: 14
 Boiling point elevation in aqueous solution, **3**: 326
 Compressibility differences, **4**: 14
 Density, **3**: 45
 Aqueous solution, **3**: 111, 113
 Dielectric constant, **6**: 83
 Aqueous solution, **6**: 100
 Diffusion in ethyl alcohol, **5**: 73
 Diffusion in methyl alcohol, **5**: 72
 Diffusion in water, **5**: 69
 Electrical conductivity, aqueous solution, **6**: 261
 Free energy, **7**: 245
 Ionization, **7**: 245
 Solution, **7**: 245
 Freezing point lowering of aqueous solution, **4**: 262
 Heat of combustion, **5**: 167
 Heat of formation, **5**: 182
 Heat of ionization, **7**: 245
 Heat of solution in water, **5**: 148
 Hydrolysis by enzymes, **7**: 157
 Hydrolysis constants, **7**: 141
 Ionization constant, **7**: 245
 Magnetic susceptibility, **6**: 361
 Melting point under pressure, **4**: 14, 18
 Solubility in water, **4**: 251
 Specific heat, **5**: 101
 Aqueous solution, **5**: 124
 Surface tension, aqueous solution, **4**: 467
 Thermal conductivity, **5**: 231
 Triple points, **4**: 14
 Vapor pressure lowering in aqueous solution, **3**: 293
 Vapor pressure, aqueous solution, **3**: 366
 Viscosity, aqueous solution, **5**: 22
 Volume change on melting, **4**: 14, 18
 -Acetic acid*
 -Acetone*
 -Ammonia*
 -Ammonium nitrate*
 -tert.-Butyl alcohol*-Thiourea
 -Cresol (o-, m-, p-)*
 -Cyanamide*
 -Dinitrobenzene (o-, m-, p-)*
 -2, 4-Dinitrotoluene*
 -Ethyl alcohol*
 -Hydrogen chloride*
 -Magnesium bromide*
 -Methyl alcohol*
 -Methylamine*
 -Phenol*
 -Potassium chloride*
 -Pyridine*
 -Sodium chloride*
 -Sodium hydroxide*
Urea acetate
 Heat of solution in water, **5**: 148
Urea formate
 Heat of solution in water, **5**: 148
Urea nitrate
 Crystallography, **1**: 324
 Heat of solution in water, **5**: 148
Urea oxalate
 Heat of solution in water, **5**: 149
Urease, **7**: 157
Urethan
 Absorption spectra, **5**: 336
 Allotropic forms, **4**: 15

* Data for system will be found under this compound in Index. Full explanation on page vii.

Urethan.—(Continued)

- Boiling point elevation in aqueous solution, **3**: 327
 Cryoscopic constant, **4**: 183, 215
 Compressibility, aqueous solution, **3**: 440
 Density, aqueous solution, **3**: 112
 Dielectric constant, **6**: 86
 Aqueous solution, **6**: 101
 Diffusion in methyl alcohol, **5**: 72
 Diffusion in water, **5**: 70
 Freezing point lowering of aqueous solution, **4**: 262
 Heat of adiabatic expansion, **5**: 146
 Heat of combustion, **5**: 167
 Heat of fusion, **5**: 132
 Heat of solution in water, **5**: 148
 Melting point under pressure, **4**: 15, 17
 Triple points, **4**: 15
 Vapor pressure, **3**: 218
 Viscosity, **7**: 214
 Volume change on melting, **4**: 15
 -Acetamide*
 -Acetanilide*
 -Acetone*
 -Amyl alcohol*
 -Arsenous bromide*
 -Benzene*
 -Carbon dioxide*
 -Chloroform*
 -*m*-Dinitrobenzene*
 -Diphenylamine*
 -Ethyl alcohol*
 -Ethyl ether*
 -Magnesium bromide*
 -Magnesium iodide*
 -Methyl alcohol*
 -*p*-Nitroanisole*
 - α -Nitronaphthalene*
 -*p*-Nitrotoluene*
 -Phenol*
 -Phenyl salicylate*
 -Propyl alcohol*
 -Pyridine*
 -Phenyl salicylate*
 -Toluene*

Uric acid

- Absorption spectra, **5**: 337, 367, 369
 Adsorption of dyes on, **3**: 252
 Diffusion in methyl alcohol, **5**: 72
 Electrical conductivity, aqueous solution, **6**: 268
 Heat of combustion, **5**: 167
 Heat of solution in water, **5**: 149
 Solubility in water, **4**: 251, 252

Urvolyte, density, 1: 144**Usnic acid**

- Crystallography, **1**: 335
 Optical rotatory power, **7**: 466

Ussingite

- Density, **1**: 153
 Refractive index, **1**: 153, 169
Uvanite, refractive index, 1: 135, 173

Uvarovite

- Density, **1**: 145
 Refractive index, **1**: 145, 165
Uvitic acid, heat of combustion, 5: 165

Va alloy, 2: 385**Vacuum, reduction of weights to, 1: 77, 80****Vacuum technique, 1: 91****Vacuum tubes, 6: 58**

- Diodes, **6**: 58
 Triodes, **6**: 59

Valentinite

- Density, **1**: 110
 Refractive index, **1**: 110, 173
Valeraldehyde, dielectric constant, 6: 88

Valeramide

- Boiling point elevation in aqueous solution, **3**: 327

Valeramide.—(Continued)

- Acetone*
 -Benzene*
 -Chloroform*
Valeric acid
 Absorption spectra, **5**: 332, 338
 Birefringence, electric, **7**: 111
 Boiling point, **3**: 219
 Compressibility, **3**: 36
 Critical temperature, **3**: 248
 Density, aqueous solution, **3**: 112, 114
 Dielectric constant, **6**: 88
 Diffusion of vapor in air, **5**: 62
 Electrical conductivity, aqueous solution, **6**: 270
 Esterification constant, **7**: 138
 Heat of combustion, **5**: 165
 Heat of vaporization, **5**: 137
 Solubility in water, **3**: 388
 Sound, velocity of, in vapor, **6**: 463
 Surface tension, aqueous solution, **4**: 468
 Thermal conductivity, **5**: 228
 Vapor pressure, **3**: 219
 Verdet constant, **6**: 428
 Viscosity, **7**: 216
 -Acetic acid*-Valeric acid
 -Benzene*
 -Camphor*
 -Chloroform*
 -Ethyl ether*
 -Methyl alcohol*
 -Naphthalene*
 -Xylene

Distribution coefficients in water, **3**: 427

Valeronitrile

- Boiling point, **3**: 219
 Dielectric constant, **6**: 88
 Electrical conductivity, **6**: 144
 Heat of vaporization, **5**: 137
 Specific heat, **5**: 109

Valerylphenylacetylene

- Magnetic susceptibility, **6**: 363

Valine, optical rotatory power, 7: 375**Valve bronze, 2: 385; cf. 563, 565****Valve steel, 2: 385; cf. 470, 508, 603, 606****Vanadinite**

- Density, **1**: 135
 Refractive index, **1**: 135, 168; **7**: 22
 Transition temperature, **4**: 7

Vanadium

- Absorption, index of, **5**: 250
 Boiling point, **1**: 102
 Cathodoluminescence, **5**: 390
 Critical potentials, **6**: 72
 Density, **1**: 105; **2**: 456
 Electronic structure, normal and excited, **6**: 72
 Emission, spectral, **5**: 242, 254
 Emission spectra, **5**: 318
 Isotopes, **1**: 47
 Magnetic susceptibility, **6**: 356
 Melting point, **1**: 105
 Persistent lines, **5**: 324
 Quantum numbers, **5**: 408
 Refraction, index of, **5**: 250
 Specific heat, **1**: 105; **5**: 94
 Spectral series, **5**: 405
 Thermochemistry, **5**: 193
 X-ray absorption limits, **6**: 36, 44
 X-ray crystal structure, **1**: 341
 X-ray emission spectra, **6**: 36
 X-ray series, limiting frequencies, **6**: 35
 Zeeman effect, **5**: 420, 429
 -Aluminum*
 -Carbon*
 -Carbon*-Chromium-Iron
 -Carbon*-Chromium-Iron-Molybdenum
 -Carbon*-Chromium-Iron-Molybdenum-Tungsten
 -Carbon*-Chromium-Iron-Nickel

Vanadium.—(Continued)

- Carbon*-Iron
 -Carbon*-Iron-Molybdenum
 -Carbon*-Iron-Nickel
 -Carbon*-Iron-Tungsten
 -Carbon monoxide*
 -Chromium*-Iron
 -Chromium*-Iron-Nickel-Silicon
 -Iron*
 -Iron*-Molybdenum
 -Iron*-Nickel
 -Iron*-Silicon
 -Nickel*
 -Oxygen*
 -Silicon*
Vanadium brass, 2: 385
Vanadium bronze, 2: 385
Vanadium carbide
 X-ray diffraction data, **1**: 343
Vanadium dichloride
 Heat of formation, **5**: 193
Vanadium dioxide
 Heat of formation, **5**: 193
 Magnetic susceptibility, **6**: 359
Vanadium nitride
 Decomposition pressure, **7**: 288
 X-ray diffraction data, **1**: 343
Vanadium oxide
 Band spectra, **5**: 416
 Magnetic susceptibility, **6**: 359
Vanadium oxytribromide
 Dielectric constant, **6**: 77
Vanadium oxytrichloride
 Density, **3**: 23
 Dielectric constant, **6**: 77
 Electrical conductivity, aqueous solution, **6**: 233
 Heat of formation, **5**: 193
Vanadium pentasulfide
 Magnetic susceptibility, **6**: 359
Vanadium pentoxide
 Dielectric constant in water, **6**: 105
 Heat of formation, **5**: 193
 Magnetic susceptibility, **6**: 359
 Refractive index, aqueous solution, **7**: 71
 -Lead oxide*
Vanadium steel, 2: 385, 472, 514, 604-607
 Analyses, table of, **2**: 487
 Endurance limits, **2**: 604-607
 Magnetic properties, **6**: 400-402
 Shear and torsion tests, **2**: 515
Vanadium tetrachloride
 Dielectric constant, **6**: 77
 Heat of formation, **5**: 193
Vanadium tetroxide
 Heat of formation, **5**: 193
 Magnetic susceptibility, **6**: 359
Vanadium trichloride
 Freezing point lowering of aqueous solution, **4**: 257
 Heat of formation, **5**: 193
Vanadium trioxide
 Heat of formation, **5**: 193
 Emission, spectral, **5**: 242
 X-ray diffraction data, **1**: 343
Vanadium trisulfide
 Magnetic susceptibility, **6**: 359
Vanadyl sulfate, electrical conductivity, aqueous solution, 6: 236
Vanadium (alloy), 2: 385
van der Waals' constants, 1: 42
van der Waals' formula (surface tension), 4: 19, 434
Vanillic acid
 Electrical conductivity, aqueous solution, **6**: 286
 Heat of solution in water, **5**: 150
Vanillin
 Absorption spectra, **5**: 343, 372
 Diffusion in methyl alcohol, **5**: 73

Vanillin.—(Continued)

- Electrical conductivity, aqueous solution, **6**: 286
- Heat of solution in water, **5**: 150
- Acenaphthene*
- Chloroacetic acid*
- Ethyl ether*
- Trichloroacetic acid*
- Vanthoffite**
 - Density, **1**: 153
 - Refractive index, **1**: 153, 169
- Vapor pressure**
 - Aqueous solutions, **1**: 67; **3**: 351
 - Commercial acids, **3**: 301
 - Critical pressures, **3**: 248
 - Liquids, **3**: 213, 215, 228, 237
 - Partial, **3**: 284, 292
 - Petroleum products, **2**: 149
 - Solids, **3**: 207
 - Solutions
 - P-T-X relations, **3**: 306, 351
 - Partial, **3**: 284, 229
 - Vapor pressure lowering, **3**: 292
 - Streaming method, **5**: 55
 - "Surface," **4**: 476
- Vaporization**
 - Heat of, **5**: 135
 - Velocity of, **5**: 53
- Varnish industry**, raw materials for, **2**: 317
- Vaseline**
 - Emission, spectral, **5**: 257
 - Rubber softener, **2**: 277
 - Thermal conductivity, **5**: 217, 228
 - See also Petrolatum.
- Vaseline oil**
 - Electrical conductivity, **6**: 146
 - X-rays, effect of, **6**: 6
- Vaucher's alloy**, **2**: 385
- Vauxite**
 - Density, **1**: 138
 - Refractive index, **1**: 138, 170
- Vegasite**, refractive index, **1**: 129, 169
- Velardene**
 - Density, **1**: 145
 - Melting point, **1**: 145
 - Refractive index, **1**: 145, 167
- Velocity**
 - Angular, conversion factors, **1**: 23
 - Conversion factors, **1**: 23
- Velocity of**
 - Chemical reaction, **7**: 113
 - Condensation, **5**: 53
 - Crystallization, **5**: 60
 - Diffusion, **5**: 62, 63, 76, 77
 - Dissolution, **5**: 55
 - Evaporation, **5**: 53
 - Gas absorption, **5**: 53
 - Gas evolution, **5**: 53
 - Light, **1**: 17
 - Sound, **6**: 461
 - Vaporization, **5**: 53
- Venezuela**, weights and measures, **1**: 14
- Venus**, characteristics, **1**: 392
- Veratric acid**
 - Absorption spectra, **5**: 345
 - Electrical conductivity, aqueous solution, **6**: 291
 - Heat of solution in water, **5**: 150
- o-Veratrole**
 - Absorption spectra, ultra-violet, **5**: 343, 372
 - Dielectric constant, **6**: 93
 - Heat of fusion, **5**: 134
 - Melting point under pressure, **4**: 10
 - Solubility in water, **4**: 253
 - Verdet constant, **6**: 429
 - p-Bromotoluene*
 - p-Xylene
 - Freezing point-solubility, **4**: 153
- Verbenene**, optical rotatory power, **7**: 410
- Verbenol**, optical rotatory power, **7**: 420

- Verbenone**, optical rotatory power, **7**: 415
- Verdet constant**, **6**: 425
 - Conversion factors, **1**: 30
 - Definition, **1**: 41
 - Dispersion, formulas for, **6**: 432
- Verilite** (alloy), **2**: 385; cf. 464, 533, 601
 - Thermal expansion, **2**: 464
- Veronal**
 - Absorption spectra, ultra-violet, **5**: 366
 - Heat of combustion, **5**: 168
- Vestalin** (alloy), **2**: 385; cf. 471, 482
 - Electrical conductivity, **6**: 185
- Vesuvianite**
 - Dielectric constant, **6**: 99
 - Thermal conductivity, **5**: 231
 - Thermal expansion, **3**: 45
- Vibration manometer**, Wien, **6**: 457
- Victor bronze**, **2**: 385, 556
- Victor metal**, **2**: 385, 480
- Victoria aluminum**, **2**: 385
- Villari effect**, **6**: 439
 - Transverse, **6**: 439
- Villiumite**. See Sodium fluoride.
- Vinyl acetate**, saponification, kinetics of, **7**: 134
- Vinyl bromide**, dielectric constant, **6**: 82
- Vinyl tribromide**
 - Tetrabromethane*
- Vinylacetonitrile**
 - Absorption spectra, **5**: 336
 - Aniline*
- Vielle unit**, **1**: 42
- Violuric acid**
 - Absorption spectra, **5**: 336, 367
 - Electrical conductivity, aqueous solution, **6**: 265
- Viscoloid**, **2**: 296
- Viscometers**, efflux, **1**: 32
 - Conversion diagram, **1**: 33
- Viscosity**
 - Conversion factors, **1**: 25
 - Definition, **1**: 42
 - Elements, **1**: 102; **5**: 2, 6
 - Fats, animal and vegetable, **2**: 209
 - Gases, **5**: 1
 - Gelatin, **2**: 223
 - Glass, **2**: 94
 - Glues, **2**: 220
 - Gutta percha, **2**: 294
 - Kinematic
 - Conversion factors, **1**: 25
 - Definition, **1**: 38
 - Latex, **2**: 255
 - Liquids, **5**: 10; **7**: 211
 - Oils, fats and waxes, **2**: 209
 - Petroleum, **2**: 146
 - Refrigerating brines, **2**: 328
 - Rubber, **2**: 255, 259
 - Soap solutions, **5**: 447
 - Solutions
 - Aqueous, **5**: 12, 20, 21
 - Metallic, **5**: 7
 - Non-aqueous, **5**: 25
 - Tars and pitches, **2**: 170, 172
- Viscosity-temperature chart**, **2**: 147
- Vision**, threshold of, **1**: 92
- Vivianite**
 - Density, **1**: 129
 - Refractive index, **1**: 129, 171
- VM steel**, **2**: 385; cf. 472, 605
- Voigt's theory** (birefringence), **7**: 109
- Volume**
 - Conversion factors, **1**: 22
 - Secondary units, **1**: 2
- Volt**, definition, **1**: 42
- Volt-faraday**, definition, **1**: 42
- Volt-second**, definition, **1**: 42
- Volumetric apparatus**, calibration of, **1**: 80
- Volumetric vessels**, calibration of, **1**: 80
- Vrbaita**, density, **1**: 118

- Vulcanization**, **2**: 256, 264
 - Accelerators of, **2**: 278
- Vulcanized fiber**
 - Density, **2**: 311
 - Dielectric constant, **2**: 300, 310
 - Dielectric strength, **2**: 300, 310
 - Electrical conductivity, **2**: 310
 - Physical and chemical agents, effect on, **2**: 300
 - Power factor, **2**: 300, 310
 - Strength properties, **2**: 311
 - Tensile strength, **2**: 300
 - Thermal conductivity, **2**: 314
 - Thermal expansion, **2**: 311
- "W" alloy, **2**: 385
- Wagner's formula** (alloy), **2**: 385; cf. 480
- Wagnerite**
 - Density, **1**: 141
 - Refractive index, **1**: 141, 170
 - Transition temperature, **4**: 7
- Wall board**, **2**: 46
- Wall tile**, water absorption, **2**: 65
- Walnut wood**
 - Density, **2**: 314
 - Thermal conductivity, **2**: 314
- Walpurgite**
 - Density, **1**: 134
 - Refractive index, **1**: 134, 173
- Wapplerite**
 - Density, **1**: 143
 - Refractive index, **1**: 143, 170
- Warne's metal**, **2**: 385
- Watch alloy**, **2**: 385
- Water**
 - Acoustic resistivity, **6**: 459
 - Activity function of vapor in nitrogen and hydrogen, **7**: 231
 - Adsorption on glass, **3**: 251
 - Allotropic forms, **4**: 11
 - Angle of contact, **4**: 434
 - Azeotropic mixtures, **3**: 318, 323
 - Maximum boiling points, **3**: 323
 - Pressure, effect of, **3**: 322
 - Band spectra, **5**: 415
 - Birefringence, electric, **7**: 110
 - Boiling point, **1**: 53; **3**: 211
 - Compressibility
 - Liquid, **3**: 40
 - Solid, **3**: 50
 - Condensation on ions and nuclei, **6**: 117
 - Copper, permeability of, to vapor, **5**: 76
 - Critical point data, **3**: 233, 248
 - Critical potentials, **6**: 72
 - Density
 - Gas, **3**: 436
 - Liquid, **1**: 80; **3**: 24
 - Saturated vapor, **3**: 234
 - Solid, **3**: 43
 - Dielectric constant, **6**: 77, 78
 - Diffusion of vapor in gases, **5**: 62
 - Dispersion formula for vapor, **7**: 11
 - Dissociation of vapor, **7**: 231
 - Electrical conductivity, **6**: 142, 152
 - Emission, spectral, **5**: 258, 259
 - Entropy, **5**: 89
 - Evaporation, velocity of, **5**: 54
 - Faraday effect, lag in, **6**: 434
 - Free energy
 - Formation, **7**: 231, 232
 - Ionization of liquid, **7**: 232
 - Liquid, **7**: 232
 - Solid, **7**: 232
 - Vaporization, **7**: 232
 - Fugacity of liquid, **7**: 232
 - Gamma rays, absorption coefficient, **6**: 21
 - Gases, solubility of, in, **3**: 255
 - Heat content, **5**: 89; **7**: 232
 - Heat of adiabatic expansion, **5**: 146, 147
 - Heat of adsorption on charcoal, **5**: 140

* Data for system will be found under this compound in Index. Full explanation on page vii.

Water.—(Continued)

- Heat of adsorption on silica gel, **5**: 141
- Heat of compression, **5**: 146, 147
- Heat of formation, **5**: 176; **7**: 231
- Heat of fusion, **4**: 11; **5**: 131; **7**: 232
- Heat of ionization of liquid, **7**: 232
- Heat of isothermal compression, **5**: 147
- Heat of transition, **4**: 11
- Heat of vaporization, **5**: 136, 138; **7**: 232
- Heat of wetting by, **5**: 142
- Interfacial tension, **4**: 436
 - Gas, variation with, **4**: 474
- Ionization by accelerated electrons, **6**: 121
- Ionization constant of liquid, **7**: 232
- Ionization product, **6**: 152
- Ions, mobility of, in, **6**: 111
- Joule-Thomson effect, **5**: 146
- Light, transmission of, **5**: 264, 273
- Magnetic susceptibility, **6**: 356
- Melting point under pressure, **4**: 11, 17
- Molecular data, **1**: 92
- Orthobaric density, **3**: 234
- Photochemical decomposition, **7**: 164, 166
- Polarization of light reflected from, **5**: 261
- Polarization of light scattered by, **5**: 266
- Pressure-volume relations for superheated steam, **3**: 436
- Radiation, transmission of, **5**: 264
- Refractive index
 - Liquid, **1**: 106, 165; **7**: 12, 13
 - Solid, **1**: 106, 166; **7**: 17
 - Vapor, **7**: 8
- Rubber, permeability of, to vapor, **2**: 272; **5**: 76
- Sound, velocity of, in
 - Gas, **6**: 462, 463
 - Liquid, **6**: 464
- Spectral filter, use as, **5**: 273
- Specific heat
 - Gas, **5**: 82; **7**: 231
 - Liquid, **5**: 89, 113; **7**: 232
 - Saturated vapors, **5**: 82
 - Solid, **5**: 95
 - Superheated vapors, **5**: 82
- Specific volume, **3**: 25
- Surface tension, **4**: 447
- Tensile strength, **4**: 434
- Thermal conductivity
 - Gas, **5**: 213, 215
 - Liquid, **2**: 315; **5**: 218, 227
 - Pressure, effect of, **5**: 227
 - Solid, **2**: 313, 315, 316; **5**: 216, 217, 231
- Thermal diffusivity, **2**: 315
- Thermodynamic potential, **5**: 89
- Transmission of radiant energy, **5**: 269
- Triple points, **4**: 11
- Vapor pressure, **3**: 210
- Vapor pressure above 1 atm., **3**: 233
- Verdet constant, **6**: 425, 426, 427
 - Dispersion, **6**: 425
- Viscosity
 - Gas, **5**: 4
 - Liquid, **5**: 10
 - Pressure, effect of, **5**: 10
- Volume change on melting, **4**: 11
- X-radiation, scattered, distribution of, **6**: 19
- X-ray diffraction bands, **1**: 351
- X-ray diffraction data, **1**: 341
- X-rays, absorption coefficient, **6**: 13
- X-rays, scattering coefficient, **6**: 17
- Air*
- Ammonia*
- Amyl benzoate*-Ethyl alcohol
- Barium iodide*-Iodine
- Benzene*-Toluene
- Benzoic acid*-Ethyl alcohol
- Benzyl alcohol*-Ethyl alcohol

Water.—(Continued)

- Bromine*
- Bromine*-Mercuric bromide
- Carbon dioxide*
- Chlorine*
- Ethyl alcohol*-Glycerol
- Ethyl alcohol*-Phenylacetic acid
- Ethyl alcohol*-Phenylethyl alcohol
- Ethyl alcohol*-Salicylic acid
- Ethyl alcohol*-Sucrose
- Ethyl alcohol*-p-Toluidine
- Hexane*
- Nitrobenzene*
- o-Nitrotoluene*
- Phenol*
- Tin*
- Toluene*
- Water, sea. *See* Sea water.
- Water glass, viscosity, **5**: 16
 - See also* Sodium silicate.
- Water-gas reaction
 - Equilibrium constants, **7**: 243
 - Free energy, **7**: 243
- Waters, natural
 - Radioactivity, **1**: 373
 - Sound, velocity of, in, **6**: 464
- Waters, spring, radioactivity, **1**: 373
- Watkin's factor, **5**: 440
- Watt, definition, **1**: 42
- Wattevillite
 - Density, **1**: 153
 - Refractive index, **1**: 153, 168
- Wave-filters for sound, **6**: 458
- Wave-length
 - Cadmium standard, **5**: 274
 - Copper lines as standard, **5**: 275
 - Definition, **1**: 42
 - Effective, definition, **6**: 11
 - Iron lines as standard, **5**: 275
 - Neon lines as standard, **5**: 275
 - Nickel lines as standard, **5**: 275
 - Silicon lines as standard, **5**: 275
 - Symbols corresponding to, **7**: 30
 - X-rays, standard, **6**: 33-34
- Wave number, **5**: 409
- Wax, mineral, **2**: 136, 168
- Waxes, **2**: 196
 - Acetyl value, **2**: 214
 - Bromine and iodine numbers, **2**: 154
 - Density, **2**: 214
 - Electrical conductivity, **2**: 211
 - Iodine value, **2**: 214
 - Saponification value, **2**: 214
 - Specific heat, **2**: 210
 - Unsaponifiable matter, **2**: 215
- Waxes, animal
 - Composition, **2**: 208
 - Properties, **2**: 205
- Waxes, vegetable
 - Composition, **2**: 208
 - Properties, **2**: 205
- Weber-Langevin theory (diamagnetism), **6**: 349
- Wegner and Guhr's aluminum, **2**: 385
- Weighing
 - Buoyancy reduction factors, **1**: 77
 - Corrections in, **1**: 74
 - Reduction *ad vacuum*, **1**: 74
- Weight
 - Conversion factors, **1**: 20
 - Definition, **1**: 42
- Weights
 - Adjustment, **1**: 73
 - Constancy, **1**: 74
 - Intercomparison, buoyancy reduction factors, **1**: 78
 - National and local systems, **1**: 1
- Weiss magneton, **6**: 346
- Weiss's law, **6**: 350
- Welch's alloy, **2**: 385, 585

Welo and Baudisch's theory (magnetization), **6**: 347

- Welsbach mantle, emission, spectral, **5**: 245
- Wertheim effect, **6**: 439
- Wessel's silver, **2**: 385; *cf.* 480
- Weston standard cell, **6**: 312
 - Unsaturated, **6**: 314
- Wetting, heat of, **5**: 142
- Whewellite
 - Density, **1**: 143
 - Refractive index, **1**: 143, 170; **7**: 24
- White alloy, **2**: 386; *cf.* 480
- White lead, rubber, use in, **2**: 286
- White metal, **2**: 372; 475, 476, 557
 - Admiralty, **2**: 370, 476, 557
 - List of, **2**: 391
- White peat. *See* Diatomaceous earth.
- Whiteware, **2**: 66
 - Abrasion, resistance to, **2**: 77
 - Body composition, **2**: 73
 - Chemical composition, **2**: 74
 - Classification, **2**: 73
 - Crushing strength, **2**: 76
 - Density, **2**: 75
 - Dielectric constant, **2**: 80
 - Dielectric strength, **2**: 81
 - Electrical conductivity, **2**: 80
 - Fixed impact and bending shock, **2**: 77
 - Hardness, **2**: 77
 - Modulus of elasticity, **2**: 76
 - Modulus of rupture, **2**: 76
 - Petrographic character, **2**: 74
 - Porosity, **2**: 75
 - Specific heat, **2**: 79
 - Tensile strength, **2**: 76
 - Thermal conductivity, **2**: 79
 - Thermal expansion, **2**: 78
 - Thermal shock, resistance to, **2**: 80
 - Toughness, **2**: 77
- Whiting, rubber, effect on, **2**: 287
- Whitneyite, electrical conductivity, **6**: 154
- Whitworth mild steel
 - Electrical conductivity, **6**: 200
- Wiedemann effect, **6**: 439
- Wiedemann's law, **6**: 349
- Wiegold (alloy), **2**: 386; *cf.* 469, 556
- Wien's displacement constant, **1**: 18; **5**: 237
 - Definition, **1**: 34
- Will and Sly stability test (explosives), **7**: 489
- Willemite
 - Density, **1**: 119
 - Melting point, **1**: 119
 - Refractive index, **1**: 119, 167; **7**: 20
- Wilmott's aluminium, **2**: 386
- Wind mills, **1**: 411
- Wire brass, **2**: 386; *cf.* 469, 555, 601
- Wires, electrically exploded, **5**: 434
- Withanil, optical rotatory power, **7**: 464
- Witherite
 - Compressibility, **3**: 50
 - Solution velocity in acids, **5**: 58, 59
 - Specific heat, **5**: 100
 - See also* Barium carbonate.
- Wittichenite, density, **1**: 123
- Wolframium (alloy), **2**: 386
- Wollastonite
 - Acids, effect of, **2**: 107
 - Density, **1**: 144
 - Refractive index, **1**: 144, 171
 - Specific heat, **2**: 101; **5**: 99
 - Transition point, **1**: 144
 - See also* Calcium metasilicate.
- Wood fiber
 - Density, **2**: 312
 - Thermal conductivity, **2**: 312
- Wood pulp, moisture content at various humidities, **2**: 316
- Wood tar pitch. *See* Pitches.
- Wood tars. *See* Tars.

* Data for system will be found under this compound in Index. Full explanation on page vii.

Wood's alloy, 2: 386

Thermal conductivity, 5: 223

Wood's metal

Absorption, index of, 5: 251

Electrical conductivity, 6: 196

Refraction, index of, 5: 251

Specific heat, 5: 121

Woods

Acoustic resistivity, 6: 459

Bulk density, 2: 46

Common name index, 2: 42

Composition, 2: 131

Density, 2: 311

Dielectric constant, 2: 310

Dielectric strength, 2: 310

Electrical conductivity, 2: 310

Fuel value, 2: 130

Gamma rays, absorption coefficient, 6: 21

Magnetic susceptibility, 6: 364

Moisture content at various temperatures, 2: 324, 325

Physical properties, 2: 1

Power factor, 2: 310

Sound, transmission of, by, 6: 459

Sound, velocity of, in, 6: 459, 465

Strength properties, 2: 311

Tannin content, 2: 243

Thermal conductivity, 2: 311

Thermal expansion, 2: 311

Thermal radiation from, 5: 244

X-rays, scattering, modification by, 6: 17

Wool

Acids, absorption of, 2: 235

Adsorption on, 3: 252

Alkali, effect of, 2: 235

Density, 2: 237, 312

Heat conductivity, 2: 238

Moisture content at various humidities, 2: 237, 323, 324

Physical properties, 2: 235

Tensile strength, 2: 236

Humidity, effect of, 2: 237

Thermal conductivity, 2: 312

Wool industry, air conditioning in, 2: 322**Work, conversion factors, 1: 24****Work function**

Photoelectric, 6: 57

Thermionic, 6: 53, 56

Wrought iron, 2: 386, 600, 602**Würtzite**

Compressibility, 3: 50

Density, 1: 118

Dielectric constant, 6: 99

Refractive index, 1: 118, 168

Sublimation temperature, 1: 118, 163

See also Zinc sulfide.

Wulfenite

Density, 1: 133

Dielectric constant, 6: 99

Melting point, 1: 133

Refractive index, 1: 133, 168; 7: 22

Thermal conductivity, 5: 232

See also Lead molybdate.

Wurtzilite, 2: 169**Xanthene dyes, absorption spectra, 7: 190****Xanthoconite**

Density, 1: 124

Refractive index, 1: 124, 173

Xanthogenic acid

Absorption spectra, 5: 336

Decomposition, kinetics of, 7: 121

Xanthone

Magnetic susceptibility, 6: 363

-1, 3, 5-Trinitrobenzene*

Xenon

Boiling point, 1: 102

Compressibility, 3: 9

Critical constants, 1: 102; 3: 204, 248

Critical potentials, 6: 72

Xenon.—(Continued)

Density

Gas, 1: 102; 3: 3

Liquid, 1: 102; 3: 21

Solid, 1: 105

Dispersion formula, 7: 11

Electrons, absorption of, by, 6: 61

Emission spectra, 5: 319

Heat of fusion, 1: 105

Heat of vaporization, 1: 102

Ionization by α -particles, 6: 122

Isotopes, 1: 47

Light, transmission of, by, 5: 265

Melting point, 1: 105

Orthobaric density, 3: 204

Persistent lines, 5: 324

Polarization of light scattered by, 5: 265

Quantum numbers, 5: 408

Refractivity, 7: 8

Solubility in aniline, 3: 264

Solubility in water, 3: 257

Specific heat, gas, 5: 80

Vapor pressure, 3: 204

Viscosity, gas, 1: 102; 5: 2

X-ray absorption limits, 6: 38

X-rays, emission efficiency, 6: 11

Xenotime

Density, 1: 138

Refractive index, 1: 138, 167

X-ray diffraction data, 1: 338

Industrial materials, 2: 356

X-ray lines, notation, 6: 25**X-ray spectra**

Continuous, 6: 27, 45

Doublets, 6: 28

Line

Atomic number, variation with, 6: 27

Absorption limits, 6: 44

Wave length, 6: 36

Atomic weight, variation with, 6: 29

Characteristics, 6: 27, 29

Doublets, 6: 28

Electron transitions, 6: 28

Energy levels, 6: 25

Limiting frequencies, 6: 35

Moseley diagram, 6: 31

Notations, 6: 25

Screening numbers, 6: 29, 31

Selection principles, 6: 31

Series, 6: 25

Standards, 6: 33

Tube voltage, variation with, 6: 32

Wave lengths, 6: 36

Width of lines, 6: 26

Wave lengths

Emission lines, 6: 36-44

Series limits, 6: 36-44

Standards, 6: 33-34

X-rays

Absorption, 6: 8

Coefficient

Apparent, 6: 20

Definition, 6: 11

Photoelectric, 6: 10, 12

Total, 6: 12

Discontinuity, 6: 12

Electron emission, relation to, 6: 20

Limits, 6: 44

Chemical combination, effect of, 6: 44

Frequency, 6: 35

Wave length, 6: 36

Characteristic rays

Emission efficiency of, 6: 10

Intensities, relative, 6: 31

Continuous spectra, 6: 45

Compton effect, 6: 17

Crystal gratings, 6: 7

Electron emission, 6: 2

Extinction, 6: 10

J-Phenomenon, 6: 1

X-rays.—(Continued)

Notations, 6: 25

Origin of, 6: 27

Polarization, 6: 2, 5

Production, efficiency of, 6: 10, 45

Reflection, 6: 49

Refraction, 6: 49

Scattered

Change in wave length of, 6: 18

Distribution of, 6: 18

Scattering, 6: 8

Scattering function, formulas for, 6: 19

Screening numbers, 6: 29, 31

Selection principles, 6: 31

Source, 6: 27

Xylan, heat of combustion, 5: 167

Xylene

Critical potentials, 6: 72

Electrical conductivity, 6: 144

Emission, spectral, 5: 257

Faraday effect, lag in, 6: 434

Flash point, 2: 161

Ignition temperature, 2: 174

Refractive index, 7: 15

Solubility in water, 3: 392

Viscosity, 5: 27

-Acetanilide*

-Acetic acid*

-Acetylsalicylic acid*

-Allylamine*

-Amyl acetate*

-Amyl formate*

-Amylamine*

-Aniline*

-Benzilic acid*

-Benzoic acid*

-Benzylamine*

-Benzylethylamine*

-Benzylmethylamine*

-Bornylamine*

-Bromoacetic acid*

-Bromoform*-Iodoform

-1-Bromopropionic acid*

-Bromosuccinic acid*

-Butyl acetate*

-Butylamine*

-Butyric acid*

-Camphoric acid*

-Camphylamine*

-Caproic acid*

-o-Chlorobenzoic acid*

-Cinnamic acid*

-Coniine*

- α -Crotonic acid*

-Dibromoethylene*

-1, 2-Dibromopropionic acid*

-Diethyl malonate*

-Diethyl oxalate*

-Diethylamine*

-Diethylene disulfide*

-Dimethylamine*

-3, 4-Dimethylaniline*

-2, 4-Dinitrobenzoic acid*

-3, 5-Dinitrobenzoic acid*

-Dipropylamine*

-Ethyl alcohol*

-Ethyl butyrate*

-Ethyl formate*

-Ethyl iodide*

-Ethyl iodide*-Methyl iodide

-Ethyl valerate*

-Ethylamine*

-Formic acid*

-Fumaric acid*

-Gentisic acid*

-Heptylamine*

-Hydrocinnamic acid*

-Iodine*-Iodoform-Methylene iodide

-Iodine*-Methylene iodide

-o-Iodobenzoic acid*

-Iodoform*-Methylene iodide

* Data for system will be found under this compound in Index. Full explanation on page vii.

Xylene.—(Continued)

- β*-Iodopropionic acid*
- Isoamylacetic acid*
- Isoamylamine*
- Isobutylamine*
- Isobutyric acid*
- Isocaproic acid*
- Isovaleric acid*
- Levulinic acid*
- Maleic acid*
- Methyl acetate*
- Methylamine*
- Methylaniline*
- Methylene iodide*
- 1-Methylpiperidine*
- Nitrobenzoic acid (*o*-, *m*-, *p*-)*
- Paraldehyde*
- Phenylacetic acid*
- Phenylethylamine*
- Piperidine*
- Piperonylic acid*
- Propionic acid*
- Propylamine*
- Pyridine*
- Pyruvic acid*
- Quinoline*
- Resorcylic acid*
- Salicylic acid*
- Stannic chloride*
- Sulfur dioxide*
- Triethylamine*
- Trimethylamine*
- Valeric acid*
- o*-Xylene**
 - Absorption spectra, **5**: 333, 343, 361
 - Azeotropic mixtures, **3**: 320–321
 - Birefringence, **7**: 111
 - Boiling point, **3**: 224
 - Compressibility, **3**: 39
 - Dielectric constant, **6**: 93
 - Dielectric strength, **6**: 106
 - Diffusion of vapor in air, **5**: 62
 - Heat of combustion, **5**: 163
 - Heat of vaporization, **5**: 137
 - Magnetic susceptibility, **6**: 363
 - Orthobaric density, **3**: 245
 - Photoluminescence, **5**: 387
 - Polarization of light scattered by, **5**: 267
 - Refractive index, **7**: 12, 43
 - Specific heat, **5**: 111
 - Surface tension, **4**: 437, 458
 - Thermal conductivity, **5**: 228
 - Vapor pressure, **3**: 224
 - Verdet constant, **6**: 429
 - Viscosity, **5**: 50, 51; **7**: 219, 223
 - Acetic acid*
 - Antimony tribromide*
 - Antimony trichloride*
 - Diethyl tartrate*
 - Ethylbenzene*
 - Hydrogen bromide*
 - m*-Xylene
 - Density, **3**: 191
 - Heat of solution, **5**: 157
 - Refractive index, **7**: 86
 - Dispersion, **7**: 106
 - Specific heat, **5**: 128
 - Surface tension, **4**: 474
 - Viscosity, **5**: 50
 - p*-Xylene
 - Density, **3**: 191
 - Heat of solution, **5**: 157
 - Refractive index, **7**: 86
 - Dispersion, **7**: 106
 - Specific heat, **5**: 128
 - Surface tension, **4**: 474
 - Viscosity, **5**: 51
- m*-Xylene**
 - Absorption spectra, **5**: 333, 343, 361
 - Azeotropic mixtures, **3**: 319, 321–322
 - Birefringence, **7**: 111, 113

***m*-Xylene.**—(Continued)

- Boiling point, **3**: 224, 346
- Compressibility, **3**: 39
- Density, **3**: 29, 34
- Dielectric constant, **6**: 82, 93, 105
- Diffusion of vapor in air, **5**: 62
- Heat of combustion, **5**: 163
- Heat of vaporization, **5**: 137
- Internal pressure, **4**: 19
- Magnetic susceptibility, **6**: 363
- Orthobaric density, **3**: 245
- Photoluminescence, **5**: 387
- Polarization of light reflected from, **5**: 261
- Polarization of light scattered by
 - Gas, **5**: 266
 - Liquid, **5**: 267
- Refractive index, **7**: 43
- Specific heat, **5**: 111
- Surface tension, **4**: 458
- Thermal conductivity, **5**: 228
- Vapor pressure, **3**: 224
- Verdet constant, **6**: 427
- Dispersion, **6**: 433
- Viscosity, **5**: 50, 51; **7**: 219, 223
- X-rays, absorption coefficient, **6**: 14, 16
- Acetic acid*
- Ammonia*
- Amyl alcohol*
- Amyl benzoate*
- Amyl chloride*
- Amyl valerate*
- Aniline*
- Anisole*
- Antimony tribromide*
- Antimony trichloride*
- Benzene*
- Caffeine*
- Camphoric acid*
- Carbon disulfide*
- Carbon tetrachloride*
- Chlorobenzene*
- Diethyl succinate*
- Diethyl tartrate*
- Dimethylaniline*
- Ethyl benzoate*
- Ethyl salicylate*
- Ethylbenzene*
- Hydrogen bromide*
- Isobutyl alcohol*
- Methyl phenyl ether*
- Naphthalene*
- Nitroaniline (*o*-, *m*-, *p*-)*
- Phenacetine*
- Phenol*
- Resorcinol*
- Sulfur*
- o*-Xylene*
- p*-Xylene
 - Density, **3**: 191
 - Heat of solution, **5**: 157
 - Refractive index, **7**: 87
 - Dispersion, **7**: 106
 - Specific heat, **5**: 128
 - Surface tension, **4**: 474
 - Viscosity, **5**: 51
- p*-Xylene**
 - Absorption spectra, **5**: 333, 343, 361
 - Azeotropic mixtures, **3**: 320–321
 - Birefringence, **7**: 111, 113
 - Boiling point, **3**: 224, 346
 - Compressibility, **3**: 39
 - Cryoscopic constant, **4**: 183
 - Density, **3**: 34
 - Dielectric constant, **6**: 93
 - Diffusion of vapor in air, **5**: 62
 - Heat of combustion, **5**: 163
 - Heat of fusion, **5**: 134
 - Heat of vaporization, **5**: 137
 - Melting point under pressure, **4**: 10
 - Orthobaric density, **3**: 245

***p*-Xylene.**—(Continued)

- Photoluminescence, **5**: 387
- Polarization of light scattered by, **5**: 267
- Refractive index, **7**: 43
- Specific heat, **5**: 112
- Surface tension, **4**: 437, 458
- Vapor pressure, **3**: 224
- Verdet constant, **6**: 429
- Viscosity, **5**: 51; **7**: 219, 223
- Volume change on melting, **4**: 10
- Acetic acid*
- Aluminum bromide*
- Amyl alcohol*
- Aniline*
- Antimony tribromide*
- Antimony trichloride*
- Benzene*
- Benzil*
- Benzoyl chloride*
- p*-Bromotoluene*
- Chlorobenzene*
- Chloroform*
- Cyclohexane*
- Diethyl tartrate*
- Ethyl succinimide*
- Ethylbenzene*
- Ethylene bromide*
- Fluorene*
- Hydrogen bromide*
- Phenol*
- Toluene*
- Trimethylcarbinol*
- Veratrole*
- Xylene (*o*-, *m*-)*
- o*-Xylene dibromide**
 - Heat of fusion, **5**: 133
 - Specific heat, **5**: 111
- m*-Xylene dibromide**
 - Heat of fusion, **5**: 133
 - Specific heat, **5**: 111
- p*-Xylene dibromide, specific heat, **5**: 111**
- o*-Xylene dichloride**
 - Heat of fusion, **5**: 133
 - Specific heat, **5**: 111
- m*-Xylene dichloride**
 - Heat of fusion, **5**: 133
 - Specific heat, **5**: 111
- p*-Xylene dichloride**
 - Heat of fusion, **5**: 133
 - Specific heat, **5**: 111
- Xylene tetrachloride (*o*-, *p*-)**
 - Specific heat, **5**: 111
- Xylenol**
 - Absorption spectra, **5**: 343
 - Dielectric constant, **6**: 93
 - Diffusion in methyl alcohol, **5**: 73
 - Photoluminescence, **5**: 387
- Xylidine**
 - Absorption spectra, **5**: 333, 341
 - Refractive index, **7**: 43
 - Aniline*
- m*-Xylidine**
 - Dielectric constant, **6**: 94
 - Refractive index, **7**: 43
 - Nitrosodimethylaniline*
 - Phenol*
- Xylonite, **2**: 296**
- Xylose**
 - Electrical conductivity, aqueous solution, **6**: 271
 - Heat of combustion, **5**: 166
 - Mutarotation, **2**: 352
 - Optical rotation, **2**: 352; **7**: 387
 - Refractive index, **7**: 29
 - Solubility in aqueous ethyl alcohol, **4**: 404
 - Solubility in ethyl alcohol, **2**: 352
- 2, 4-Xylyl ethyl ether, specific heat, **5**: 112**
- "Y" alloy, **2**: 386; cf. 534–542, 601, 608**
- Yale bronze, **2**: 386; cf. 556**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Yarns

- Breaking strain, **2**: 237
Tensile strength, **2**: 238
Year, definitions, **1**: 42, 391
Yeast. See Amylase, Catalase, Invertase, Maltase, Raffinase.
Yellow brass, **2**: 386, 469, 470, 555, 556
Yellow gold, **2**: 386, 586
Yield point, definition, **2**: viii
Yohimbine
Absorption spectra, ultra-violet, **5**: 370
Optical rotatory power, **7**: 476
Young's modulus
Building materials, **2**: 51
Conversion factors, **1**: 24
Definition, **1**: 42
Glass, **2**: 93, 97
Magnetic field, effect of, on, **6**: 439
Ytterbium
Electrons freed by X-rays, energy of, **6**: 5
Emission spectra, **5**: 320
Persistent lines, **5**: 324
X-ray absorption limits, **6**: 40
X-ray emission spectra, **6**: 40
X-ray series, limiting frequencies, **6**: 35
Ytterbium chloride
Absorption spectra, solutions, **5**: 327
Electrical conductivity, aqueous solution, **6**: 233
Magnetic susceptibility, **6**: 359
Aqueous solution, **6**: 364
Ytterbium oxalate
Electrical conductivity, aqueous solution, **6**: 258
Solubility in aqueous solutions, **7**: 339
Ytterbium oxide
Magnetic susceptibility, **6**: 359
Specific heat, **5**: 98
Ytterbium sulfate
Decomposition pressure, **7**: 291
Electrical conductivity, aqueous solution, **6**: 236
Solubility in water, **4**: 227
Yttrium
Boiling point, **1**: 102
Cathodoluminescence, **5**: 390
Critical potentials, **6**: 72
Density, **1**: 105
Electrons, thermal emission of, **6**: 54
Emission, spectral, **5**: 242
Emission spectra, **5**: 320
Isotopes, **1**: 47
Magnetic susceptibility, **6**: 356
Melting point, **1**: 105
Quantum numbers, **5**: 408
Persistent lines, **5**: 324
Spectral series, **5**: 406
Thermionic work function, **6**: 54
Thermochemistry, **5**: 194
X-ray absorption limits, **6**: 38
X-ray emission spectra, **6**: 37
X-ray series, limiting frequencies, **6**: 35
X-rays, absorption coefficient, **6**: 13
Zeeman effect, **5**: 420
Yttrium bromide
Solubility in water, **4**: 227
Yttrium carbonate
Magnetic susceptibility, **6**: 359
Yttrium chloride
Absorption spectra, solutions, **5**: 327
Electrical conductivity, aqueous solution, **6**: 233
Heat of formation, **5**: 194
Magnetic susceptibility, **6**: 359
Solubility in water, **4**: 226
Yttrium citrate
Solubility in citric acid, **7**: 338
Yttrium ethyl sulfate
Density, **1**: 138
Refractive index, **1**: 138, 166

Yttrium fluoride

- Calcium chloride*
Yttrium hydroxide
Heat of formation, **5**: 194
Yttrium hydroxybenzoate (*m*-, *p*-)
Electrical conductivity, aqueous solution, **6**: 245
Yttrium malonate, solubility in aqueous solutions, **7**: 338
Yttrium molybdate
Density, **1**: 138
Melting point, **1**: 138
Refractive index, **1**: 138, 168; **7**: 23
Specific heat, **5**: 98
-Lead molybdate*
Yttrium nitrate
Dehydration behavior of hydrate, **7**: 289
Solubility in water, **4**: 227
X-rays, absorption coefficient, **6**: 13
Yttrium oxalate
Dehydration behavior of hydrate, **7**: 289
Electrical conductivity, aqueous solution, **6**: 258
Solubility in aqueous solutions, **7**: 338
-Potassium oxalate*
-Sulfuric acid*
Yttrium oxide
Diffusion into tungsten, **6**: 56
Electrical conductivity, **6**: 148
Electrons, thermal emission of, **6**: 55
Emission, spectral, **5**: 242
Magnetic susceptibility, **6**: 359
Melting point, **4**: 84
Specific heat, **5**: 98
Thermionic work function, **6**: 55
Yttrium salicylate, electrical conductivity, aqueous solution, **6**: 245
Yttrium sulfate
Decomposition pressure, **7**: 289
Density, **1**: 138
Electrical conductivity, aqueous solution, **6**: 236
Heat of formation, **5**: 194
Magnetic susceptibility, **6**: 359
Refractive index, **1**: 138, 170
Solubility in water, **4**: 227
-Sodium sulfate*
Yttrium tartrate
-Ammonium tartrate*
Yugoslavia, weights and measures, **1**: 14
Zaratite
Density, **1**: 132
Refractive index, **1**: 132, 165
Zebedassite
Density, **1**: 142
Refractive index, **1**: 142, 169
Zeeman effect, **5**: 418
Zeiss immersion refractometer
Table for, **2**: 340
Zelco, **2**: 386, 546
Zeolite, dehydration behavior, **7**: 312
Zeophyllite
Density, **1**: 144
Refractive index, **1**: 144, 166
Zepharovichite
Density, **1**: 137
Refractive index, **1**: 137, 170
Zeppelin alloys, **2**: 386; cf. 468, 534-536, 599-601
Zero, absolute, definition, **1**: 34
Zeunerite
Density, **1**: 134
Refractive index, **1**: 134, 167
Zimalium (alloy), **2**: 386
Zinc
Absorption, index of, **5**: 250
Boiling point, **1**: 102; **3**: 205
Brass, diffusion in, **5**: 77
Cathodoluminescence, **5**: 388, 390
Compressibility, **3**: 47, 49

Zinc.—(Continued)

- Condensation, irreversible, temperature of, **5**: 53
Contact potential, **6**: 57
Copper, diffusion in, **5**: 77
Corbino effect, **6**: 419
Critical potentials, **6**: 72
Density
Liquid, **1**: 102; **2**: 457, 463
Solid, **1**: 105; **2**: 456
Elastic properties, **2**: 546
Electrical conductivity
Liquid, **1**: 103
Solid, **1**: 105; **6**: 136, 137, 140
Low temperature, **6**: 129, 134
Magnetic field, effect of, **6**: 422
Single crystal, **6**: 129, 135
Electrode potential, **6**: 320, 332; **7**: 252
Electrons, absorption of, by vapor of, **6**: 61
Electrons, transmitted, velocity of, **6**: 62
Electrons freed by X-rays, energy of, **6**: 5
Emission, spectral, **5**: 254, 255
Emission spectra, **5**: 320
Entropy, **5**: 89
Ettingshausen effect, **6**: 420
Fluorescence of vapors, **5**: 391
Free energy
Electrode reaction, **7**: 252
Fusion, **7**: 252
Reaction with carbon dioxide, **7**: 252
Sublimation, **7**: 252
Vaporization, **7**: 252
Gamma rays, absorption coefficient, **6**: 14, 21
Hall effect, **6**: 416, 417
Hardness, **2**: 546
Heat content, **5**: 89
Heat of fusion, **1**: 105; **2**: 458
Heat of vaporization, **1**: 102; **2**: 458
Hydrogen, permeability to, **5**: 76
Isotopes, **1**: 47
Magnetic susceptibility, **6**: 356
Magnetron number, **6**: 346
Mechanical properties, **2**: 545
Melting point, **1**: 53, 105
Nernst effect, **6**: 420
Oxidized, emission, spectral, **5**: 244
Peltier coefficient, **6**: 227, 228
Persistent lines, **5**: 324
Photoelectric current, **6**: 69
Photoelectric threshold, **6**: 68
Quantum numbers, **5**: 408
Refractive index, **5**: 250; **7**: 20
Refractivity of vapor, **7**: 8
Righi-Leduc effect, **6**: 421
Solution velocity in aqueous acids, **5**: 57, 58
Solution velocity in dissolved iodine, **5**: 56
Solution velocity in salt solutions, **5**: 57
Sound, velocity of, in, **6**: 465
Specific heat
Liquid, **5**: 94; **7**: 252
Solid, **1**: 105; **5**: 86, 89, 94, **7**: 252
Spectral series, **5**: 406
Surface tension, **4**: 440
Thermal conductivity, **5**: 220, 221
Magnetic field, effect of, **6**: 424
Thermal expansion
Liquid, **1**: 102; **2**: 463
Solid, **1**: 105; **2**: 462
Thermochemistry, **5**: 184
Thermodynamic potential, **5**: 89
Thermoelectric properties, **6**: 215, 225
Thomson effect, **6**: 228
Vapor pressure, **3**: 205
Viscosity, **5**: 7
Volume change on fusion, **2**: 474
Volume change on solidification, **2**: 475

* Data for system will be found under this compound in Index. Full explanation on page vii.

Zinc.—(Continued)

- X-ray absorption limits, 6: 37
- X-ray crystal structure, 1: 341
- X-ray emission spectra, 6: 37
- X-ray lines, relative intensities, 6: 32
- X-ray series, limiting frequencies, 6: 35
- X-rays, absorption coefficient, 6: 13–15
- X-rays, absorption, discontinuity in, 6: 12
- X-rays, emission efficiency, 6: 11
- X-rays, scattering coefficient, 6: 17
- Zeeman effect, 5: 420
- Aluminum*
- Aluminum*-Cadmium
- Aluminum*-Cadmium-Copper-Magnesium-Manganese
- Aluminum*-Copper
- Aluminum*-Copper-Iron
- Aluminum*-Copper-Iron-Manganese-Silicon
- Aluminum*-Copper-Iron-Manganese-Tin
- Aluminum*-Copper-Iron-Nickel-Silicon
- Aluminum*-Copper-Iron-Silicon
- Aluminum*-Copper-Magnesium-Manganese
- Aluminum*-Copper-Manganese
- Aluminum*-Copper-Tin
- Aluminum*-Lead
- Aluminum*-Magnesium
- Aluminum*-Tin
- Antimony*
- Antimony*-Bismuth
- Antimony*-Copper-Lead-Tin
- Antimony*-Copper-Tin
- Antimony*-Lead
- Arsenic*
- Arsenic*-Copper-Lead-Tin
- Arsenic*-Copper-Tin
- Bismuth*
- Bismuth*-Cadmium
- Bismuth*-Silver
- Bismuth*-Tin
- Cadmium*
- Cadmium*-Lead
- Cadmium*-Magnesium
- Calcium*
- Cobalt*
- Cobalt*-Copper-Iron-Nickel
- Copper*
- Copper*-Iron
- Copper*-Iron-Lead-Tin
- Copper*-Iron-Manganese-Nickel
- Copper*-Iron-Tin
- Copper*-Lead
- Copper*-Lead-Tin
- Copper*-Magnesium
- Copper*-Manganese
- Copper*-Nickel
- Copper*-Nickel-Tin
- Copper*-Tin
- Gold*
- Iron*
- Lead*
- Lead*-Silver
- Lead*-Tin
- Magnesium*
- Mercury*
- Mercury*-Silver
- Nickel*
- Potassium*
- Selenium*
- Silver*
- Sodium*
- Tellurium*
- Thallium*
- Tin*

Zinc acetate

- Ammine
 - Decomposition pressure, 7: 255
 - Heat of decomposition, 7: 256

Zinc acetate.—(Continued)

- Crystallography, 1: 320
- Density, 1: 119
- Aqueous solution, 3: 65, 104; 7: 70
- Diffusion in water, 5: 65
- Electrical conductivity, aqueous solution, 6: 244
- Freezing point lowering of aqueous solution, 4: 255
- Heat of formation, 5: 185
- Melting point, 1: 119
- Refractive index, 1: 119, 169
- Aqueous solution, 7: 70
- Specific heat, 5: 96
- Aqueous solution, 5: 122
- Surface tension, aqueous solution, 4: 464
- Ethyl alcohol*

Zinc alloys

- British specifications, 2: 388
- List of, 2: 390

Zinc amalgams

- Partial vapor pressure, 3: 284
- X-ray diffraction data, 1: 348
- Mercurous sulfate*

Zinc benzenesulfonate

- Ammine, decomposition pressure, 7: 256
- Density, aqueous solution, 3: 104

Zinc benzoate

- Ammines
 - Decomposition pressure, 7: 256
 - Heat of decomposition, 7: 256
- Solubility in water, 4: 221

Zinc blende, emission, spectral, 5: 259**Zinc bromate**

- Density, aqueous solution, 3: 64
- Electrical conductivity, aqueous solution, 6: 244, 254
- X-ray diffraction data, 1: 342

Zinc bromide

- Ammines
 - Decomposition pressure, 7: 253
 - Heat of decomposition, 7: 253
 - Heat of formation, 5: 185
- Concentration cells, 6: 325
- Decomposition pressure of hydrate, 7: 253
- Density, aqueous solution, 3: 64
- Drying agent, value as, 3: 385
- Electrical conductivity, aqueous solution, 6: 234, 239
- Heat of formation, 5: 185
- Magnetic susceptibility, 6: 357
- Methylamine complex, decomposition pressure, 7: 253
- Solubility in water, 4: 221
- Aluminum bromide*
- Ethyl iodide*
- Pyridine*
- Quinoline*

Zinc butyrate

- Crystallography, 1: 320
- Refractive index, 1: 119, 169

Zinc carbonate

- Decomposition pressure, 7: 255
- Emission, spectral, 5: 259
- Free energy change on solution, 7: 255
- Heat of formation, 5: 185
- Heat of solution in carbonic acid, 7: 255
- Reflectivity, selective, 5: 260
- Refractive index, 7: 20
- Solubility in carbonic acid, 7: 255
- Specific heat, 5: 96
- X-ray diffraction data, 1: 342
- See also Smithsonite.

Zinc chlorate

- Ammines
 - Decomposition pressure, 7: 253
 - Heat of decomposition, 7: 253
- Density, aqueous solution, 3: 64, 104
- Electrical conductivity, aqueous solution, 6: 244, 254

Zinc chlorate.—(Continued)

- Freezing point lowering of aqueous solution, 4: 255
- Refractive index, aqueous solution, 7: 70
- Solubility in water, 4: 221
- Zinc chloride**
 - Absorption spectra, 5: 329
 - Ammines
 - Decomposition pressure, 7: 252
 - Heat of decomposition, 7: 252
 - Heat of formation, 5: 185
 - Boiling point elevation in aqueous solution, 3: 325
 - Concentration cells, 6: 325
 - Critical potentials, 6: 72
 - Decomposition pressure of hydrate, 7: 252
 - Density, aqueous solution, 3: 64, 107
 - Diffusion in water, 5: 65
 - Drying agent, value as, 3: 385
 - Electrical conductivity, 6: 148
 - Aqueous solution, 6: 231, 232
 - Freezing point lowering of aqueous solution, 4: 255
 - Heat of formation, 5: 185
 - Hydrolysis constant, 7: 252
 - Magnetic susceptibility, 6: 357
 - Aqueous solution, 6: 364
 - Methylamine complex, decomposition pressure, 7: 253
 - Refractive index, aqueous solution, 7: 70
 - Solubility in water, 4: 221, 245
 - Specific heat, 5: 96
 - Aqueous solution, 5: 122
 - Surface tension, aqueous solution, 4: 464
 - Thermal conductivity, aqueous solution, 5: 229
 - Vapor pressure, aqueous solution, 3: 366
 - Vapor pressure lowering in aqueous solution, 3: 294
 - Verdet constant, aqueous solution, 6: 427
 - Viscosity, aqueous solution, 5: 14
 - X-rays, absorption coefficient, 6: 13
- Acetone*
- Ammonium chloride*
- Barium chloride*
- Bismuth chloride*
- Cadmium chloride*
- Calcium chloride*
- Cobaltous chloride*
- Cuprous chloride*
- Ethyl alcohol*
- Ethyl ether*
- Ferric chloride*
- Hydrogen chloride*
- Lead chloride*
- Magnesium chloride*
- Manganous chloride*
- Methyl sulfide*
- Piperidine*
- Potassium chloride*
- Pyridine*
- Quinoline*
- Sodium iodide*
- Stannous chloride*
- Strontium chloride*
- Sulfuric acid*
- Thallium monochloride*
- Zinc oxide
 - Freezing point-solubility in water, 4: 304
- Zinc cyanide**
 - Heat of formation, 5: 185
 - Potassium cyanide*
- Zinc dithionate**
 - Ammine
 - Decomposition pressure, 7: 254
 - Heat of decomposition, 7: 254
 - Heat of formation, 5: 185

Zinc ethylHeat of formation, **5**: 185Photoelectric threshold, **6**: 68**Zinc ferrocyanide**, dehydration behavior of hydrate, **7**: 279**Zinc fluoride**Heat of formation, **5**: 185-*Sodium fluoride****Zinc fluosilicate**Density, **1**: 119Refractive index, **1**: 119, 166; **7**: 21**Zinc formate**

Ammines

Decomposition pressure, **7**: 255Heat of decomposition, **7**: 255Diffusion in water, **5**: 65Heat of formation, **5**: 185**Zinc hydride**, band spectra, **5**: 416**Zinc hydroxide**Concentration cells, **6**: 324Heat of formation, **5**: 185Ionization constant, **7**: 252Magnetic susceptibility, **6**: 357Solubility in ammonium hydroxide, **7**: 256Solubility in methylammonium hydroxide, **7**: 256-*Ethylamine**-*Methylamine**-*Sodium hydroxide****Zinc hyposulfite**, heat of formation, **5**: 185**Zinc iodate**Ammine, decomposition pressure, **7**: 254**Zinc iodide**

Ammines

Decomposition pressure, **7**: 253Heat of decomposition, **7**: 253Heat of formation, **5**: 185Density, aqueous solution, **3**: 65Electrical conductivity, aqueous solution, **6**: 235, 239Heat of formation, **5**: 185Methylamine complex, decomposition pressure, **7**: 254Solubility in water, **4**: 221-*Ethyl iodide**-*Quinoline****Zinc malate**, optical rotatory power, **7**: 353**Zinc manganate**Absorption spectra, solutions, **5**: 328**Zinc metasilicate**Melting point, **4**: 84-*Cadmium metasilicate**-*Lithium metasilicate****Zinc naphthalene-1, 5-disulfonate**Crystallography, **1**: 320Density, **1**: 119Refractive index, **1**: 119, 171**Zinc naphthol-2-sulfonate**Ammine, decomposition pressure, **7**: 256**Zinc o-naphthoylbenzoate**Ammine, decomposition pressure, **7**: 256**Zinc nitrate**Absorption spectra, solutions, **5**: 327

Ammines

Decomposition pressure, **7**: 255Heat of decomposition, **7**: 255Density, aqueous solution, **3**: 65, 107Diffusion in water, **5**: 65Electrical conductivity, **6**: 148Aqueous solution, **6**: 237, 240Freezing point lowering of aqueous solution, **4**: 255Heat of formation, **5**: 185Heat of fusion, **5**: 131Hydrolysis constant, **7**: 252Refractive index, aqueous solution, **7**: 70Solubility in water, **4**: 221Specific heat, **5**: 96Aqueous solution, **5**: 122Surface tension, aqueous solution, **4**: 464**Zinc nitrate**.—(Continued)Vapor pressure, aqueous solution, **3**: 366Vapor pressure lowering in aqueous solution, **3**: 294Viscosity, aqueous solution, **5**: 14-*Methyl acetate**-*Neodymium nitrate**-*Nitric acid**-*Praseodymium nitrate****Zinc nitride**, heat of formation, **5**: 185**Zinc nitrite**

Ammines

Decomposition pressure, **7**: 255Heat of decomposition, **7**: 255**Zinc orthosilicate**Heat of formation, **5**: 185Melting point, **4**: 84**Zinc oxalate**Ammine, decomposition pressure, **7**: 255Concentration cell, **6**: 325Electrical conductivity, aqueous solution, **6**: 258Heat of formation, **5**: 185**Zinc oxide**Albedo, **5**: 262, 263Compressibility, **3**: 50Density, **1**: 118Electrical conductivity, **6**: 153Electrons, thermal emission of, **6**: 55Entropy, **7**: 252Free energy, **7**: 252Reaction with carbon monoxide, **7**: 252Heat of formation, **5**: 184Luminescence, **5**: 389Magnetic susceptibility, **6**: 357Melting point, **4**: 84Moisture content at various humidities, **2**: 324Refractive index, **1**: 118, 167; **7**: 20Rubber, use in, **2**: 286Specific heat, **5**: 96; **7**: 252Thermal conductivity, **5**: 217, 221Thermal expansion, **3**: 43Thermionic work function, **6**: 55Thermoelectric power, **6**: 224X-ray diffraction data, **1**: 342

See also Zincite.

-*Carbon dioxide**-*Chromic acid**-*Cobaltous oxide**-*Phosphoric acid**-*Potassium hydroxide**-*Sea salt**-*Silica**-*Sodium hydroxide**-*Zinc chloride****Zinc oxybromide**, heat of formation, **5**: 185**Zinc oxychlorides**, heat of formation, **5**: 185**Zinc oxyiodide**, heat of formation, **5**: 185**Zinc oxysulfate**Decomposition pressure, **7**: 256**Zinc perchlorate**Ammines, heat of decomposition, **7**: 253Decomposition pressure of hydrate, **7**: 253**Zinc peroxide**, heat of formation, **5**: 185**Zinc p-phenolsulfonate**-*Ethyl alcohol****Zinc phosphate**Reflectivity, selective, **5**: 260**Zinc powder**, thermal conductivity under reduced pressures, **2**: 315**Zinc selenate**Density, **1**: 119Emission, spectral, **5**: 259Reflectivity, selective, **5**: 260Refractive index, **1**: 119, 166; **7**: 20**Zinc selenide**Density, **1**: 118Heat of formation, **5**: 185**Zinc selenide**.—(Continued)Refractive index, **1**: 118, 165X-ray diffraction data, **1**: 342**Zinc silicate**, heat of formation, **5**: 185**Zinc sulfate**Absorption spectra, solutions, **5**: 327Ammine, decomposition pressure, **7**: 254Boiling point elevation in aqueous solution, **3**: 325Compressibility, aqueous solution, **3**: 439Concentration cells, **6**: 325Decomposition pressure, **7**: 256Hydrates, **7**: 254Density, **3**: 44Aqueous solution, **3**: 65, 107Diffusion in water, **5**: 65Electrical conductivity, aqueous solution, **6**: 231, 235, 240Freezing mixtures, use in, **1**: 64Freezing point lowering of aqueous solution, **4**: 255Heat of adiabatic expansion, aqueous solution, **5**: 147Heat of decomposition of hydrate, **7**: 254Heat of formation, **5**: 185Hydrolysis constant, **7**: 252Magnetic susceptibility, **6**: 357Optical rotatory power, **7**: 353Reflectivity, selective, **5**: 260Refractive index, **7**: 20Solubility in water, **4**: 221, 245Pressure, effect of, **4**: 265Solution velocity in water, **5**: 56Sound, velocity of, in aqueous solution, **6**: 464Specific heat, **5**: 96Aqueous solution, **5**: 122Surface tension, aqueous solution, **4**: 464Thermal conductivity, **5**: 217Aqueous solution, **5**: 229Transition temperature, **4**: 7Pressure, effect of, **4**: 264Vapor pressure, aqueous solution, **3**: 366Vapor pressure lowering in aqueous solution, **3**: 294Viscosity, aqueous solution, **5**: 14X-rays, absorption coefficient, **6**: 13

See also Zinkosite.

-*Ammonium sulfate**-*Cupric sulfate*-*Cupric sulfate**-*Hydrogen chloride**-*Magnesium sulfate**-*Manganous sulfate*-*Nitric acid**-*Potassium sulfate**-*Sodium sulfate**-*Sulfuric acid**-*Thallium monochloride****Zinc sulfide**Compressibility, **3**: 50Dielectric constant, **6**: 105Illumination, effect of, **6**: 79Emission, spectral, **5**: 258Entropy, **5**: 90Heat content, **5**: 90Heat of formation, **5**: 185Photoelectric current, **6**: 69Luminescence, **5**: 389Refractive index, **7**: 20Solution velocity in acids, **5**: 59Specific heat, **5**: 90, 96Thermal expansion, **3**: 44Thermodynamic potential, **5**: 90Transition temperature, **4**: 7Verdet constant, **6**: 426X-ray diffraction data, **1**: 342

See also Sphalerite, Wurtzite.

-*Cuprous sulfide**-*Ferrous sulfide**-*Lead sulfide**

* Data for system will be found under this compound in Index. Full explanation on page vii.

Zinc sulfide.—(Continued)

-Sea salt*

-Silver sulfide*

Zinc sulfite

Ammine

Decomposition pressure, 7: 254

Heat of decomposition, 7: 254

Zinc tartrate, solubility in water, 4: 221**Zinc telluride**

Density, 1: 119

Heat of formation, 5: 185

Melting point, 1: 119

Refractive index, 1: 119, 165

Zinc tetrathionate

Ammines

Decomposition pressure, 7: 254

Heat of decomposition, 7: 254

Zinc thiocyanate

Ammines

Decomposition pressure, 7: 255

Heat of decomposition, 7: 255

Zinc thiosulfate

Ammines

Decomposition pressure, 7: 254

Heat of decomposition, 7: 254

Zinc valerate

Density, aqueous solution, 3: 104

-Ethyl alcohol*

Zincaluminite

Density, 1: 137

Refractive index, 1: 137, 166

Zincite

Compressibility, 3: 50

Refractive index, 7: 20

Thermal conductivity, 5: 232

Thermal expansion, 3: 43

See also Zinc oxide.

Zinkalium (alloy), 2: 386**Zinkenite**

Density, 1: 116

Sublimation temperature, 1: 116, 163

Zinkosite

Density, 1: 118

Refractive index, 1: 118, 172

See also Zinc sulfate.

Zircon

Compressibility, 3: 50

Density, 1: 114

Dielectric constant, 6: 99

Electrical conductivity, 6: 148

Expansion on heating, 2: 84

Magnetic susceptibility, 6: 364

Melting point, 4: 84

Refractive index, 1: 114, 167; 7: 20

Specific heat, 5: 96

Zircon.—(Continued)

Thermal conductivity, 5: 231

Thermal expansion, 3: 44

X-ray diffraction data, 1: 341

Zirconia

Crushing strength, 2: 83

Density, 2: 82

Electrical conductivity, 2: 86

Expansion on heating, 2: 84

Fusion temperature, 2: 83

Thermal expansion, 2: 83

Zirconia brick

Density, 2: 82

Electrical conductivity, 2: 86

Fusion temperature, 2: 83

Porosity, 2: 82

Temperature of failure under load, 2: 83

Zirconium

Boiling point, 1: 102

Cathodoluminescence, 5: 390

Critical potentials, 6: 72

Density, 1: 105; 2: 456

Electrical conductivity, 1: 105; 6: 136, 137

Low temperature, 6: 129, 134

Electrons, thermal emission of, 6: 54

Emission, spectral, 5: 242

Emission spectra, 5: 321

Heat of vaporization, 7: 247

Isotopes, 1: 47

Magnetic susceptibility, 6: 356

Melting point, 1: 105

Persistent lines, 5: 324

Quantum numbers, 5: 408

Specific heat, 1: 105; 5: 94

Spectral series, 5: 406

Thermionic work function, 6: 54

Thermochemistry, 5: 183

X-ray absorption limits, 6: 38

X-ray crystal structure, 1: 341

X-ray emission spectra, 6: 37

X-ray series, limiting frequencies, 6: 35

X-rays, absorption coefficient, 6: 13

Zeeman effect, 5: 420

-Carbon*-Iron-Nickel

-Nickel*

-Silicon*

Zirconium bromide

-Stannic bromide*

Zirconium carbide

Heat of formation, 5: 183

X-ray diffraction data, 1: 341

Zirconium dioxide

Decomposition pressure, 7: 247

Fused, yield point, 4: 84

Zirconium dioxide.—(Continued)

Heat of vaporization, 7: 247

Luminescence, 5: 389

Melting point, 4: 84

Specific heat, 5: 96

Aqueous solution, 5: 122

Vapor pressure, 7: 247

X-ray diffraction data, 1: 341

Zirconium hydroxide

Heat of formation, 5: 183

Zirconium nitride

X-ray diffraction data, 1: 341

Zirconium orthosilicate

-Lithium orthosilicate*

Zirconium oxide

Diffusion in tungsten, 6: 56

Electrons, thermal emission of, 6: 55

Evaporation from tungsten, 6: 56

Heat of formation, 5: 183

Magnetic susceptibility, 6: 356

Specific heat, 2: 85

Thermionic work function, 6: 55

-Lithium oxide*-Silica

-Silica*

-Sulfuric acid*

Zirconium oxybromide

Heat of formation, 5: 183

Zirconium oxychloride

Heat of formation, 5: 183

Refractive index, 1: 114, 166

Zirconium oxynitrate

Heat of formation, 5: 183

Zirconium oxysulfate

Electrical conductivity, aqueous solution, 6: 235

Heat of formation, 5: 183

Zirconium selenide

X-ray diffraction data, 1: 341

Zirconium silicate. See Zircon.**Zirconium steel**, 2: 386, 532**Zirconium sulfate**

Electrical conductivity, aqueous solution, 6: 235

X-rays, absorption coefficient, 6: 13

-Sulfuric acid*

Zirconium sulfide

X-ray diffraction data, 1: 341

Zirconyl sulfate

-Ammonium sulfate*

-Sodium sulfate*

Zisium (alloy), 2: 386; cf. 537, 601**Ziskon** (alloy), 2: 386; cf. 468, 546**Zoisite**

Density, 1: 146

Refractive index, 1: 146, 172

* Data for system will be found under this compound in Index. Full explanation on page vii.

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